THE BUILDER

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EDUCATION IN THE REPAIR OF OLD BUILDINGS

THE measures proper to be taken in the repair of old buildings still seem to be ranked among those disputed matters of opinion concerning which every man is entitled to adhere to his own views. Architectural education does little to guide those who attempt to diagnose the state of decay and its causes, and, as a consequence, the most astonishingly divergent views find expression. After all that has been written concerning the condition of St. Paul's Cathedral as a dangerous structure, comes a suggestion by a correspondent in the R.I.B.A. *Journal* that the "work required to be done is not so serious as was at first anticipated; that, therefore, the remainder of the fund should be expended in the thorough cleaning down and making good of the whole of the interior and parts of the exterior stonework, including the sculpture, and that the unsatisfactory mosaics in the cupola should be substituted by bright and beautiful mosaic work; that all the scaffoldings and hoardings should be cleared away and that the whole Cathedral should be opened for Thanksgiving Service on Easter Day, April 4, 1926." Since Easter Day has passed without this happy thought having been acted upon, it may be supposed that those in charge of the repairs hold a less optimistic view as to the safety of the Cathedral. They have not intimated that their estimate of £120,000 to £140,000 is proving excessive, or refunded the balance of the quarter-million pounds subscribed by the public, and the presumption is that they consider that works costing something in the neighbourhood of this large sum will have to be executed. The protest of the Cathedral authorities against the building of a new St. Paul's Bridge and its approach roads is also an indication that, in their opinion, all is not well with the structure. The estimates of other surveyors and engineers have represented the extent of the damage at an even more formidable rate.

It is apparent that some of these mutually contradictory opinions must ultimately be proved incorrect, though it is equally obvious that they have been seriously entertained by men who have taken pains to discover what, if anything, was wrong with the Cathedral. All parties claim to have examined the building, so the differences in the estimates must be due to differences in the inferences drawn from the facts, and these are matters of personal observation and judgment.

In what respect has observation been misdirected or judgment led astray that it is impossible to come to something more nearly approaching unanimity? Perhaps it is that the ordinary professional training which fits the architect and the civil engineer for the design and erection of sound new buildings does not impart a knowledge of all the principles and practices which should be understood in reference to the special care of old buildings. With the passing of time, old structures exhibit signs of age, and it is the special business of those who estimate the extent of decay in an ancient monument to know how to make allowance for the structural enfeeblement indicated by those signs.

The author of the letter quoted above is quite clear that he has not seen the signs nor recognised the enfeeblement. "I have been trying for three years past to find out what is the matter with St. Paul's. I have visited it from top to bottom several times, and I have asked to be told where to put my hand on a particular part where there is a defect. I say, and I challenge contradiction, that St. Paul's Cathedral to-day is as safe, structurally, as it was when Sir Christopher Wren left it."

Perhaps, since actions speak louder than words, the most emphatic contradiction of this well-expressed but, as we think, too optimistic opinion is to be found in the gradually increasing scope of the programme of repairs now being carried out in the Cathedral. Apart from the very questionable and unfortunate reference to the demolition of the dome of Wren's building at the hands of a future generation, the original repair scheme of the St. Paul's Commission only comprised two principal proposals. These were to grout the main piers of the dome under pressure and to replace their damaged facing stones with new. The recently published progress report shows that to this project several additions have now been made which may be taken as representing the needs of the cathedral. The mention of reinforcement, of timber shoring, and of a model made for experimental purposes indicates the progress of education in the special arts of the conservator which is taking place simultaneously with the execution of the works. That these measures were strongly advocated by critics of the partial scheme may or may not have anything to do with the enlargement of the programme, though readers of *The Builder* will recognise that they have been matter of public discussion in these pages before being adopted by the custodians of the building. It is most probable that the suggestions of the critic and the suggestions gleaned from the Cathedral in the course of its continued examination have both contributed to the creation of a better-informed view of the slight progressive movements in old buildings in connection with their shape and weight. A description of these movements appeared in *The Builder* for August 18, 1922, more than two years before the St. Paul's controversy, and it throws a light upon the significance of small bends and cracks in a structure subjected to eccentric or lateral pressures.

Of two surveyors, one forewarned as to the continuous and progressive nature of the minute deflections and fractures in a laterally stressed masonry structure, and the other unaware of this aspect of decay, the first will realise that he must protect the building against future displacements of material, though the second will be content merely to make good the more obvious signs of partial failure in the past. Costly and comprehensive measures, scientifically calculated and applied, will be demanded by the one, though a little patching, putty, or paint will satisfy the mind of the other until further decay in the building demonstrates the inefficiency of these means.

The accurate survey of buildings in relation to their loads and to the bends and cracks induced by them, is not only a means of education, but the best preliminary to the formation of an accurate estimate of the cost of repair. The preparation and publication of such survey drawings by the St. Paul's Commission would not, perhaps, have altogether stifled criticism or prevented differences of opinion on what is, after all, a highly complex subject, but it can hardly be doubted that the knowledge which might have been acquired and disseminated would have been of immense advantage to the profession and to the building. Even now, a complete survey should be the first step. While there are many parts of the building on which a hand may be laid upon a defect, St. Paul's Cathedral has been carefully patched by successive repairers, and the extent of its decay can only be revealed as the result of definite research. The fact that the programme of repairs has been enlarged is probably a sign of increased knowledge, but it has to be seen whether that knowledge is yet full enough to justify the repair scheme in its present form, or whether next year will show further enlargement of its scope.

In the meantime, the breaking of dams in Wales and Yorkshire and the fall of a church tower at Toulouse have given practical confirmation to the pronouncement that buildings may fall suddenly and unexpectedly. The analysis of causes of decay and the design of measures of repair evidently deserve a larger place in architectural education than they now receive.

NOTES

Country Cottages. THE Minister of Health has announced his intention of introducing a bill to provide for the repair of existing houses in rural areas. Many of our country cottages are being allowed to fall into ruin, and others are being repaired and enlarged in a manner that is out of keeping with their architectural character. One of the major problems of the day is how to provide accommodation in rural areas where earnings are so small that economic rents, even with the help of the subsidy, are too high for the agricultural labourer to pay; also, existing cottages are so small that the usual Ministry-sized cottage seems almost large by comparison. A generous measure of assistance to the owners of country cottages, and a little guidance as to their repair and enlargement, might help materially to better the situation.

The City Churches. THE latest suggestion is that the "redundant" City churches should be transported to the United States and the colonies. The supporters of this proposal claim that the churches would look much better in the fresh country than they do set amid the offices and warehouses of London. It is astonishing that those who profess admiration for the genius of Wren should not see that his genius fashioned the churches for the positions they were to occupy and that to shift a church from its city site into a smiling valley in one of the colonies would be to deprive it of its intended character. We are told that "leading architects" consider that it would be comparatively easy to move the churches stone by stone to their new destinations. It does not take a leading architect to tell us this, but we are convinced that no responsible body of architectural opinion could be found to favour this, or any other, scheme of removal.

Offices on Bridges. MR. GEORGE WENYON'S scheme for erecting blocks of offices over bridges, which he is reported to have placed before the Ministry of Transport, must be considered from the standpoint of artistic effect as well as from that of economy in bridge-building. The plan is to erect the offices upon arches above the level of the bridge, allowing space for vehicles to pass underneath; and it is claimed that the office rents would, within a few years, defray the cost of erecting the bridge. The scheme would appear to be feasible in any situation where bascules are not required, and opportunities would be afforded for the design of "imposing" river fronts. Mr. Wenyon is reported as expressing the opinion that existing Thames bridges could easily be adapted to his scheme. One would imagine that the piers would be equal to supporting their added burden; but there is the question, amongst others, of providing means of approach to the offices without obstructing the public footway.

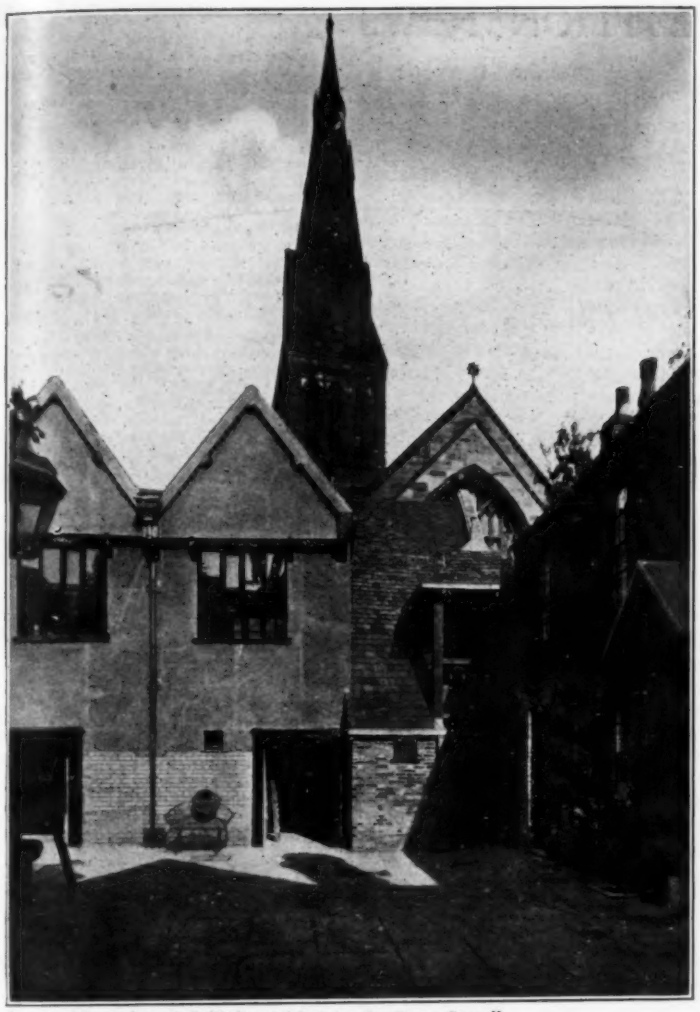
Smoke Abatement Conference. A CONFERENCE on Smoke Abatement is to be held in Birmingham from September 7 to 10. A special conference-room has been erected in connection with the Universal Smoke Abatement Exhibition under the auspices of the Smoke Abatement League of Great Britain. Many papers are to be read dealing with the industrial and domestic smoke problems, and we hope that the experts in these subjects will be in a position to outline practical solutions. The conference should have the effect of drawing the ordinary householder's attention to this evil and how much it is costing him in health and money. If there existed a genuine appeal from the public for a cheap and efficient smokeless fuel it seems incredible that it should still continue to be an apparently unrealisable ideal. The conference programme will not be restricted to instruction, but will combine a strong social appeal and visits to places of interest.

Exhaust Noises. THE Home Secretary has issued a warning to users of motor-cars and motor-cycles to the effect that he is instructing the police to enforce strictly the law concerning silencers. The noises on our roads have become an intolerable nuisance. Not only do they affect the nerves of those living on the main roads, but they seriously reduce the value of property. It is idle for an owner or agent to attempt to explain away to a possible purchaser the obvious fact that if he buys such a house he must be prepared for a pandemonium that will prevent him from hearing himself speak in his front rooms and garden. The campaign against unnecessary noise, whether on the road or in the workshop, is gaining ground, and the Home Secretary's action will be widely appreciated.

The Dublin Horse Show. THE first stage in the new buildings of the Royal Dublin Society's premises at Ballsbridge was completed in good time to cope with a show that easily surpassed all previous records, with an attendance of over 93,000, due, no doubt, to the international jumping competition. Some of the designs in the kiosks, pavilions, and gardens reached a high standard, although more, perhaps, might have been made of an effective colour scheme for the main hall. The

From the Year Book of the Ancient Monuments Society.

Hough End Hall.



From a "Souvenir and Guide," published by the Town Council.

The Old Town Hall, Leicester.

Restored by Messrs. Fosbrooke, Bedingfield & Grundy.

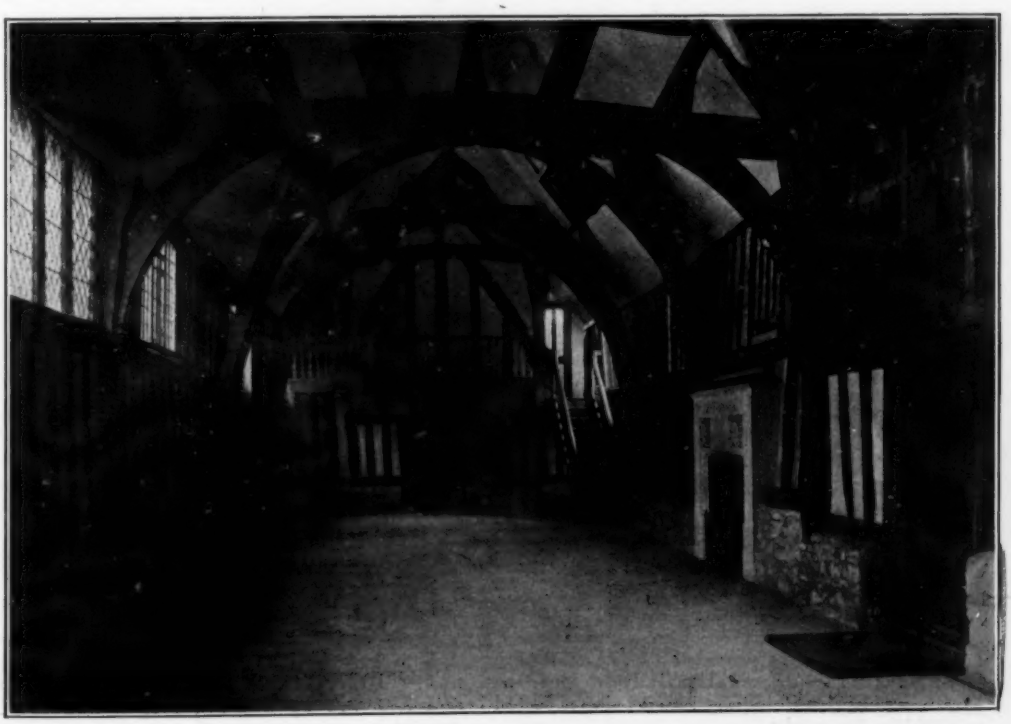
poster exhibition included some really remarkable work which augurs well for the coming generation of poster artists. The Ballsbridge ground seems to follow the precedent of Wimbledon. Huge new stands are put up and the accommodation remains inadequate to meet the constantly increasing demand for seats.

Leicester Old Town Hall.

The Leicester Town Council have very wisely restored their old Town Hall building so that its charm and historic interest may for many years to come afford interest and pleasure to the citizens and visitors to the town. It was the meeting-place of the town authorities for close on four centuries, and in May of the present year was reopened after the careful restoration undertaken by Messrs. Fosbrooke, Bedingfield & Grundy, a Leicester firm of architects. The large hall is a specially interesting part of the building, and appears to have been erected by the Corpus Christi Guild between 1390 and 1400. The great hall was extended in 1450 by the addition of the two western bays, which, as will be seen in our view, had differently shaped trusses. In addition to the picturesque old hall the building contains a fine old room called the Mayor's parlour, which has an old carved mantelpiece dating from 1637. The fine old Mayor's seat on the side of the parlour opposite the window was presented by Richard Inge, an ancestor of our Dean Inge. It is a cause for much satisfaction that the Leicester Town Council have dealt so well with this valuable relic of old times. Our illustrations are from a "Souvenir and Guide," which may be obtained (price 6d. each) from the Old Town Hall, or from the Museum or the Central Library.

The Ancient Monuments Society.

We welcome the efforts of the Ancient Monuments Society, which has only had some two years' existence, but which bids fair to give some genuine help towards the preservation of ancient monuments and buildings. It was established in Manchester, and has for its especial aim the oversight of old work in the north. The president, Lord Crawford, says he thinks he may have been elected on the theory that the converted sinner is an eloquent witness to the truth—not, indeed, for any sins of his own, but, as he points out, as the descendant of an old family which destroyed an old keep and allowed the wonderful old Haigh Hall to be dismantled. The report of the Society contains much of interest and nothing more noticeable than the charming old Hough End Hall, which we reproduce. The Arterial Road No. 10, a great thoroughfare 100 ft. wide, was actually shown as passing through one corner of this beautiful old building. Through representations laid before them, the committee allowed the projected road to miss the old hall. The situation, however, is yet far from satisfactory, for a building of such special character ought to be protected and surrounded by enough gardens and grounds to save the general amenity of its effect from the growth and development of new property. It is a matter for regret that the Manchester Corporation could not buy it outright and see to its proper upkeep and effect. One can only hope that the future will still find a right solution in the matter. This is only one of many interesting things referred to in the Society's report, and we sincerely hope its efforts will meet with a worthy response.



The Old Town Hall, Leicester.

GENERAL NEWS

Professional and Business Announcement.

Mr. G. Topham Forrest, F.R.I.B.A., Superintending Architect of Metropolitan Buildings and Architect to the London County Council, who had intended to spend the month of August in Scotland, has been detained in London through the serious illness of his wife, and must remain in London indefinitely.

New Bridge for Hull.

The Royal Assent has been given to the Hull Corporation Bill which provides for the building of a new North Bridge, at a cost of £275,000. It is anticipated that the Ministry of Transport will bear half the cost.

Surveyor's Estate.

Mr. Arthur Vernon, High Wycombe, Bucks, land agent and surveyor, of Messrs. Vernon & Sons, a Past President of the Surveyors' Institution, left £27,319, with net personalty £10,258.

Town-Planning Institute: Annual Provincial Conference.

The Annual Provincial Conference of the Town-Planning Institute will this year be held at Stratford-on-Avon, from October 8 to 10 inclusive. The programme and full particulars will be issued later.

International Road Congress.

The International Road Congress and Exhibition will this year be held at Milan in September. A British Organising Committee, with Mr. Rees Jeffreys as Chairman, has been appointed to make the necessary arrangements for the British representation.

William Morris's House for Sale.

"The Red House," Bexley Heath, built for William Morris, where the poet-artist and his wife lived, is for sale, together with the original furniture and mural paintings and stained glass by Burne-Jones.

14th Century English Triptych.

The rare 14th century English triptych which has recently been acquired by the British Museum, is now on exhibition in the King Edward VII Gallery of the Museum.

Town-Planning Appointments.

Applications are frequently being made to the Town-Planning Institute for the names of town-planning assistants requiring appointments. Those requiring such appointments are invited to send their names to the Secretary of the Institute, 11, Arundel-street, London, W.C.

Burlington Arcade.

It is announced that Burlington Arcade, between Piccadilly and Burlington Gardens, has been sold by its owner, Lord Chesham, and that the transfer will take effect next year. Whether the announcement portends its disappearance is not known.

Skegness Development Scheme.

The Ministry of Health has sanctioned the application by the Skegness local authority to borrow £33,000 for the construction of an orchestral piazza and bathing pool on the front, to be carried out from the designs of the local surveyor, Mr. R. H. Jenkins.

Brighton Improvement Scheme.

Brighton Hotels Association has made a number of suggestions to the Town Council for increasing the attractiveness of the town. The proposals include a tidal swimming pool, an undercliff drive to Rottingdean, the extension of the Western Lawns eastward along the central section of the front, with bowling greens and miniature golf courses, and a central screen and a band enclosure on the front. The tidal bathing pool is a scheme to which the Council are already committed, but they have decided that the reconstruction of the Aquarium, which will cost £90,000, must take precedence of it. The fate of the latter scheme will shortly be decided, the Ministry of Health inquiry into it being expected within a few weeks.

COMPETITION NEWS

Infectious Diseases Hospital, Doncaster.

Mr. T. R. Milburn, F.R.I.B.A., the assessor in this competition, has now issued his award as follows:—

First (£200).—Messrs. Adshead, Topham & Adshead, 14, St. Ann's-square, Manchester.

Second (£100).—Messrs. J. H. Morton & Son, N.E. Bank Chambers, South Shields.

Third (£75).—Mr. Charles A. Broadhead, Moorgate, Rotherham.

Specially Commended.—Messrs. Harrison & Ash, 22, Ellison-place, Newcastle-upon-Tyne.

Commended.—Messrs. Kenyon & Livock, Messrs. Horth & Andrew, Messrs. Gibson, Gordon & Wilson, Messrs. Lanchester, Lucas & Lodge, Messrs. Channon & Sons, Messrs. Hall & Clark, Mr. Laurence Kennard.

The whole of the designs sent in (60 sets) have been placed on exhibition at the Mansion House, Doncaster, and will be open for inspection there on each weekday until August 14, between the hours of 10 a.m. and 1 p.m., and 2.30 p.m. and 5 p.m., except on Saturday, when the hours will be from 10 a.m. to 12.30 p.m.

Public Works Competition.

The Organising Committee of the Public Works, Roads and Transport Congress Exhibition have decided to offer the following prizes for papers which are submitted for discussion at the Congress to be held in November, 1927:—

1st Prize—Gold Medal and £50.
2nd Prize—Silver Medal and £25.
3rd Prize—Bronze Medal and £10.

The competition is open without restriction of nationality. The subject of each paper must be one which falls within the services covered by the Congress, that is to say—Highways and Bridges, Water Supply, Sewerage and Sewage Disposal, Cleansing, Gas, Electricity, Housing and Town Planning, Tramways and Light Railways, Agriculture (Small Holdings, Land Drainage, Land Reclamation and Agricultural Education), and Local Government Organisation. Papers must be submitted not later than January 17, 1927. Application for the rules of the competition must be made to the Hon. Secretary, Public Works, Roads and Transport Congress, 84, Eccleston-square, London, S.W.1. Papers may be submitted for discussion at the Congress without being entered for competition. Such papers should be clearly marked "Not for competition."

Silverwork Design.

The Worshipful Company of Goldsmiths for Improvement of Design in Silverwork announce that in the first competition in connection with the Ascot Cup, the King's Gold Vase and the Hunt Cup a small number of competitors have been selected by the judges and requested to submit final drawings before the end of October. All designs and models sent by competitors will shortly be returned. About 300 drawings, photographs, &c., were received from over 90 firms and craftsmen from different centres throughout the country. Further competitions for other specific trophies, as well as for smaller silverwork, at values ranging from £1 to £30, are contemplated next winter.

Oldbury Elementary School Competition.

In illustrating last week the winning design in this competition, we gave the names of the successful architects as "Messrs. Hobbs and Davis." The correct attribution should have been "Messrs. F. B. Hobbs, F.R.I.B.A., and W. F. Davies, A.R.I.B.A., joint architects."

Victoria Hospital, Blackpool.

Architects desirous of taking part in this limited competition should send their names by August 14, together with any special qualifications, to Mr. John Hacking, Hon. Secretary, Victoria Hospital, Blackpool. Mr. H. Percy Adams, F.R.I.B.A., assessor. Architect placed first will carry out work. Premiums of £100 and £50 will be awarded second and third designs.

COMPETITIONS OPEN.

	Particulars published in "Builder."	Sending in date.
Plan for construction of Conference Hall, for League of Nations, Geneva. International Competition, Sir John Burnet being British representative on Jury of Assessors.	July 23 ..	Jan. 25, 1927
Cenotaph, Liverpool. To be erected outside St. George's Hall. Premiums: 1st, £250; 2nd, £150; 3rd, £100; 4th, £50. Author of selected design will be paid commission of 500 guineas, to include premium. Professor C. H. Reilly, assessor. Second premium will only be awarded to ex-Service man	June 11 ..	Sept. 30
New Offices for Scottish Legal Life Assurance Society, Bothwell-street, Glasgow. Mr. John Keppie, A.R.S.A., F.R.I.B.A., assessor. Apply Mr. William Watson, Secretary, 84, Wilson-street, Glasgow, before August 21. Deposit £1 1s.	Aug. 6 ..	Oct. 30
Incorporated Architects in Scotland: (1) Rowand Anderson Medal and £100: City Art Gallery and Museum; (2) Rutland Prize (£50) for Study of Materials and Construction; (3) Prize (£10 to £15) for 3rd year Students in Scotland; (4) Maintenance Scholarship, £50 per annum for 3 years. Apply Secretary of the Incorporation, 15, Rutland-square, Edinburgh	Nov. 6 ..	—
Academy, Perth. Open to architects practising in Scotland. Premiums: £100 and £50. Mr. James D. Cairns, assessor. Apply Mr. R. Martin Bates, Education Offices, Perth. Deposit £1 1s.....	July 23 ..	Jan 3, 1927

CORRESPONDENCE

[While we are glad to publish letters on professional and other matters of interest to our readers, it must be understood that we do not necessarily endorse the remarks of correspondents, who will oblige us if they will express their views as briefly as possible.]

The R.I.B.A. and New Societies.

SIR,—My attention has been called to the recent correspondence in the professional papers relating to the activities of the Incorporated Association of Architects and Surveyors, a society formed, apparently, by certain gentlemen who seem to be greatly concerned with the interests of our profession and desire to create a new society for the protection of unattached architects.

It is difficult to see how such a society can be of the smallest value to those who are already members of the Royal Institute of British Architects, or any of its allied societies, or the Surveyors' Institution. It can give them no standing in their profession or any advantages that they do not already possess.

No Registration Bill which in any way threatens the interests of the unattached architects who are in *bona-fide* practice could possibly become law, and the Bill now being prepared by the Royal Institute of British Architects specially safeguards them.

I would like to caution all architects not to confuse the situation and possibly endanger the other interests they have at heart by joining entirely superfluous and misleading organisations.

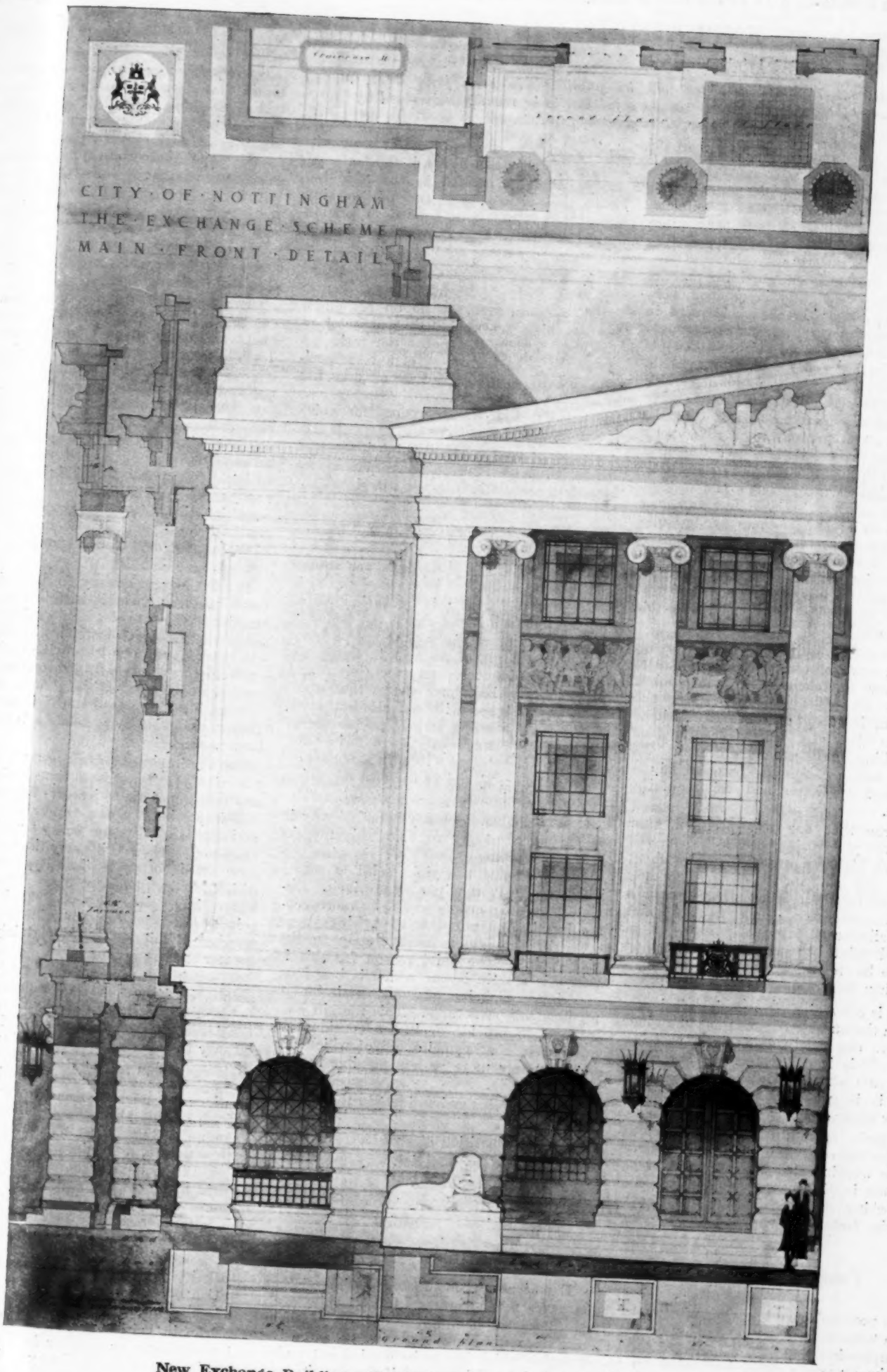
E. GUY DAWBER,
President of the Royal Institute of British Architects.

A Tombstone Epitaph.

SIR,—Further to your articles by Professor W. R. Lethaby, you might be interested in the following epitaph on a tomb in Portesham Church, in Dorsetshire, which I saw the other day:—

"William Weare lies heere in
Rest as how and I and all men must
Once plundred by Sabean force
Some call it war but others worse
With confidence he pleads his cause
And kings to be above those laws
Septembebers eyghth day died hee
When near the age of 63
Ano Domini 1670."

Poole. ALFRED F. BURT.



New Exchange Buildings, Nottingham: Detail of Main Front.

Mr. T. Cecil Howitt, A.R.I.B.A., Architect.

CONSTRUCTIONAL STEELWORK SIMPLY EXPLAINED.—II

By OSCAR FABER, O.B.E., D.Sc., M.Inst.C.E., etc.

[EDITORIAL NOTE.—*This series, which will be published in book form later, is intended to present the problem in so simple a form as to be readily understood by those having no special engineering training.*]

(5) From what has been said it will be clear that when steel is stressed to a definite point called the yield point, which varies somewhat with different specimens, but lies round about 17 tons per square inch for ordinary mild steel, it begins to flow or yield to a very appreciable extent, the load on the specimen remaining practically constant through this phenomenon. Consequently, if we reached this point in any practical structure, this structure would deform so much as to be quite useless. If a tie in a lattice girder were to stretch in this manner, the girder would deflect so much that the riveted joints would be so twisted and distorted as to fail, and the loading on the stanchions or other supports would become so eccentric as to cause these to fail also in all probability. In any case the deflection of the girder would become so great as to break every ceiling and floor dependent on it; and, of course, to be quite useless for any architectural or structural purpose. If we are considering a specimen in compression which is liable to buckle, we shall see presently that buckling will take place as soon as this yielding condition is reached.

It is, therefore, quite clear that we must so design our structures that the actual stress never approaches this yield point, and that for all practical purposes the yield point is really the absolute limit to which the stress can go in structural work before failing of the structure occurs. We must, in fact, differentiate between failure of the test specimen and failure of the structure.

It is true that our test specimen, after passing the yield point, had to be stressed to a much higher figure (somewhere about 30 tons per sq. inch) before it actually broke, but for the reasons already given a composite structure, such as a lattice girder, fails for all practical purposes when the yield point is reached, and this must therefore be regarded as the real danger point when we are dealing with structures.

(6) It is convenient in practical design to agree on the number of tons per square inch which we can safely adopt in a practical design. This is called the *working stress* or the *safe stress*. In the case of mild steel this is generally taken at about 7½ tons per square inch.

The *factor of safety* is generally defined to be the ratio between the breaking stress and the working stress. Where the breaking stress is 30 tons per square inch and the working stress is 7½ tons per square inch, the factor of safety would therefore be

$$\text{Factor of safety} = \frac{30}{7\frac{1}{2}} = 4$$

This nomenclature is most unfortunately chosen because it not unreasonably conveys the impression that if the factor of safety is 4 the structure could be loaded up to four times its weight before failure would occur. This is not by any means the case because, as has already been stated, failure would in all probability occur when the yield point was reached, and it would in many ways be much better if the factor of safety had been defined as the ratio between the yield point and the working stress; but it has been defined so long in the other manner that it would perhaps at this stage only make confusion worse if the same words were now given a fresh meaning.

Let the student then be on his guard against this, and realise that a factor of safety of 4 merely denotes the ratio between the breaking stress of a test specimen and the working stress, and does not in any sense imply that the structure can be loaded to four times the load for which it was designed.

Assuming that the yield point of the particular steel used was 17 tons per square inch, there would in fact be a margin of

$$\frac{17}{7\frac{1}{2}} = 2\tfrac{1}{4} \text{ approximately}$$

if a working stress of 7½ tons per square inch had been adopted in the design. It is to be regretted that this figure instead of the previous one is not called the factor of safety, as it much more closely represents the actual margin of strength in the structure. Extensive tests on steel joists and girders of all kinds have shown that when these are designed with a factor of safety of 4—*i.e.*, a working stress one-quarter of the breaking stress of the material—the structures themselves will only carry somewhere between 2¼ and 2¾ the load for which they were designed.

It may not unreasonably be asked why it should be necessary to have this margin between working stress of 7½ tons per square inch and the yield point of somewhere about 17 tons per square inch. Obviously our structures would be more economical if we adopted a working stress approximating much more closely to the yield point. The chief reason for this is that this margin is one which is based on experience as being generally desirable to produce safe structures. This margin has, in fact, to provide against a considerable number of contingencies, all of which are unfortunately more or less possible in any practical work.

These contingencies include the following:—

(*a*) Repetition of stress.
(*b*) Faulty material.
(*c*) Faulty design.
(*d*) Overloading of structure.
(*e*) Bad workmanship.
(*f*) Bad erection.
(*g*) Corrosion.

Experience unfortunately indicates that however much care we adopt, while each of these can be minimised none of them can be entirely avoided in an extensive practice which has to be carried out under practical conditions, and if the margin provided to allow for them is reduced beyond a certain reasonable point, which can only be determined by practice, the inevitable result would be that the percentage of failure is far greater than is fortunately the case in good practice to-day.

Let us consider the various points in greater detail.

(7) *Repetition of stress.* It has been found that a specimen which fails in the testing machine under a single application of 30 tons per square inch will fail, for example, at 25 tons per square inch if the load is applied a certain number of times. It will even fail at 20 tons per square inch, but the number of applications would be immensely greater. This fact is, of course, well known and taken advantage of by anyone who bends a piece of iron backwards and forwards a great many times with the object of breaking it.

Clearly a structure like a warehouse is designed to be loaded and unloaded as frequently as one's clients' requirements may demand, and must therefore be designed at a stress so low that an infinite number of applications would not cause fracture.

A great deal of research work on this subject has been done, and testing machines are in use in many research laboratories, so arranged as to apply a load and remove it so rapidly that several million applications can be made in a reasonable time under conditions in which the number of times can be recorded by the machine. This has added a great deal to our knowledge of the subject.

It will be unnecessary to deal with the point in greater detail in this elementary treatise except to draw attention to the point that it is one which the factor of safety is called upon to provide against.

(8) *Faulty material.* Theoretically, of course, no faulty material should ever find its way into a job, and the vigilance of engineers undoubtedly prevents this to a very large extent.

On all important work samples of the materials are tested from time to time, and any faulty material rejected. Nevertheless, it is impossible for an engineer of great experience to say that no faulty material ever reaches the job, and if every time a piece of steel was incorporated in a large structure, which had a yield point a few tons per square inch lower than that specified, and this were to produce a failure, then the number of failures would certainly be far greater than they are.

A considerable quantity of steel, for example, is imported from abroad. Even before the war foreign steel was often at a considerably lower price than British, and latterly the operation of the exchanges has, of course, accentuated this difference. It so happens that French and Belgian specifications for steel are much lower than the British. The French specification, for example, only requires 24 tons per square inch ultimate, as against the British 28 to 33, and it requires great vigilance to ensure that in the stress of practical working, when perhaps a client's revised requirements at the last moment have produced a demand for a section not originally contemplated, but which a contractor happens to have in stock in a foreign section and not in a British one, that in no single instance will any substitution ever be made.

Even in British material a slight excess of phosphorus or sulphur in the chemical constituents of the steel may easily produce a weakening from the standard specification which may not in every case be detectable.

The process of rolling whereby the ordi-

nary commercial sections of angles, joists, etc., are produced from steel ingots also leaves these sections with residual stresses due to this deformation and to the unequal cooling of the different portions of the sections. The web of the joist being much thinner than the flanges naturally cools more rapidly and tends to shorten more than the flanges. This shortening obviously cannot take place, and a state of stress is, therefore, produced which does not entirely disappear when all the section has cooled down to normal temperatures. In some cases these stresses are so considerable that actual cracks or fractures are produced in the sections. In this case that particular section would probably be thrown out, but there remain the other thousands of specimens where these initial stresses were not sufficient to cause the actual fracture, but nevertheless remain to a lesser extent in the section before it is incorporated in the structure.

Obviously the existence of these stresses weakens these members, and without going into the matter in greater detail here attention is merely drawn to the existence of these stresses as one of the matters which a factor of safety is required to cover.

(9) *Faulty design.* Obviously there should never be faulty design, but in practice one is bound to admit that one frequently comes across it. How many stanchions, for example, which are actually eccentrically loaded, are designed as if they were concentrically loaded, the error in some cases easily amounting to 100 per cent. How frequently the stresses due to the structure wracking under the influence of wind or of subsidence of one or more of the points of support are unprovided for in the design, and the margin between the working stress and the yield point is the only margin provided to stand between the design and disaster.

(10) *Overloading of structure.* Clearly no structure should ever be overloaded, but how frequently have we not all seen a building, for example, designed to carry floors intended for a load of 100 lb. on a square foot, loaded up with a heap of bricks, sand, or other builder's material on the floors to a height of 3 ft., so producing an actual loading two or three times as great as that for which the structure is designed.

You will understand that I am not defending this practice. On the contrary, the vigilance of the engineer must be continually directed towards eliminating it as far as possible, which can be done in many ways, such as by a greater spreading of these necessary loads, by strutting such heavily loaded areas, and by many other methods. Nevertheless one is bound to admit after a considerable experience that in spite of all such vigilance overloading to some extent, and at some periods, does take place in most of the buildings with which one is acquainted, not only during erection but also subsequently. How often has a comparatively light floor had a two-ton safe wheeled across it. These examples could be multiplied almost indefinitely.

No doubt one would be justified in adopting the attitude that theoretically none of these should ever be allowed to happen but practically we know they do happen, and the factor of safety does undoubtedly contain an element which provides for these cases.

SOCIETIES AND INSTITUTIONS

HAMPSHIRE AND ISLE OF WIGHT ARCHITECTS.

A general meeting of the Hampshire and Isle of Wight Architectural Association was held at the White Lion Hotel, Hartley Bridge, recently. The secretary, Mr. A. L. Roberts, in submitting his report, referred to the report of the Special Joint Sub-committee on the establishment of an Architects' and Builders' Consultation Board for Hampshire and the Isle of Wight, which had been accepted both by the Hants and Isle of Wight Architectural Association and the Southern Counties Federation of Building Trades Employers. The rules and standing orders as recommended were adopted.

The following are the respective representatives appointed on the first Board:—Architects: Basingstoke, J. Arthur Smith (chairman); Southampton, L. W. Jukes (quantity surveyor); Portsmouth, A. E. Cogswell; Winchester, T. D. Atkinson; Bournemouth, W. J. Mountain; A. L. Roberts (hon. secretary). Builders: Southampton, Harry Stevens; Portsmouth, G. J. Davis; Bournemouth, W. G. Spickernell; the rest of the county, Jno. Croad, W. J. Lansdell, F. Woolley (hon. secretary). Vice-chairman to be appointed from the builders.

The secretary reported that the membership had now reached 130; that the Council had contributed £10 to the R.I.B.A. maintenance scholarships in architecture, and that the vice-president had been appointed the representative of the H. and I.W. A.A. on the Southern Area Committee. He also referred to the endeavours being made to follow Southampton's lead in getting Civic Societies established in the large towns in the county. Since the last meeting Mr. C. G. Stillman, the hon. treasurer, had resigned upon his appointment as Deputy County Architect of Cheshire, and as a temporary measure he (the hon. secretary) was carrying on the treasurer's work until a new hon. treasurer was appointed.

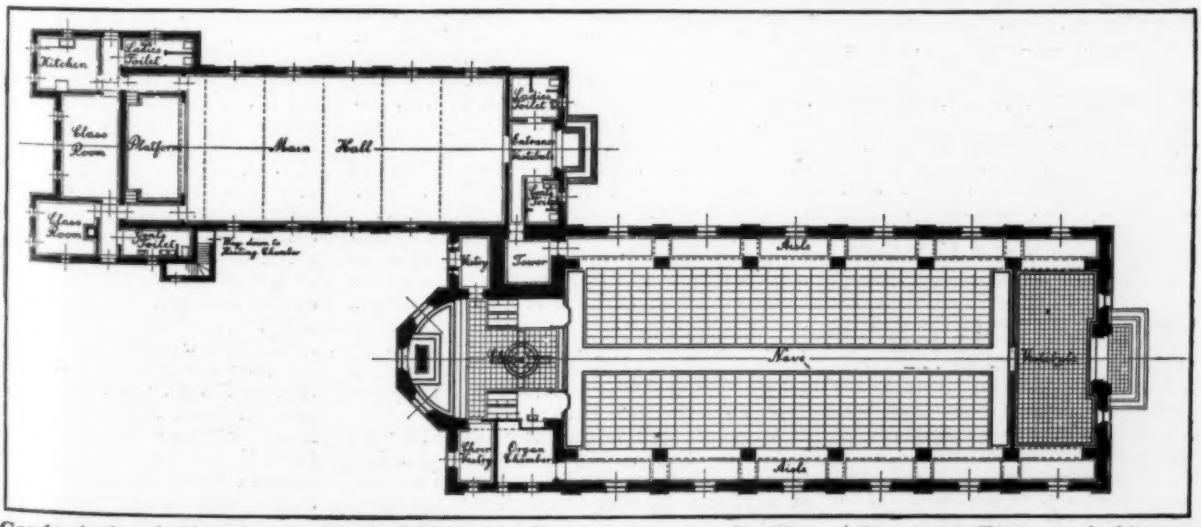
The hon. secretary's report was approved, and a resolution carried congratulating Mr. Stillman on his appointment and thanking him for his services.

After the meeting the members and their friends, numbering about 50 in all, had lunch at the hotel, following which the party proceeded to Bramshill Park, where, through the kindness of Captain and Mrs. Denzil Cope, they viewed both the house and gardens.

Through the generosity of the vice-president and his wife, Mr. and Mrs. J. Arthur Smith, the party were entertained to tea in the Jacobean room at the George Hotel, Odiham. A hearty vote of thanks was passed to Mr. and Mrs. Smith for their kindness, and the party then returned by charabanc and motors after a most enjoyable excursion.

INSTITUTION OF MUNICIPAL AND COUNTY ENGINEERS.

Town-planning problems in the south-west were discussed at the annual conference, held at Paignton recently, of the South-Western District of the Institution of Municipal and County Engineers. Presenting a report upon the subject, the Chairman, Major H. A. Garratt, borough engineer of Torquay, said that a circular letter which had been addressed to the local authorities in Devonshire revealed the fact that only in a few instances had the subject of town planning been taken into serious consideration. The more the sub-committee considered the question of regional planning, said Major Garratt, the more pronounced became the difficulties before them, chiefly owing to the different characteristics of the four counties comprising their areas and its immense size. It became apparent that the counties could only be regionally planned by the consent and with the co-operation of all the local authorities concerned, and, obviously, it would be impossible regionally to plan any district where the local authority refused the assistance of its officers. Therefore the suggestion that the Institution should undertake a big job of this kind could not be made, but the initial move should be on the part of the Ministry of Health. Each county should be a regional area, and the county surveyor in each case, with the co-operation of the local surveyor, was the only person who should prepare the county plan or plan any regional planning. Action had already been taken in Somerset, Devon and in the Plymouth area. Schemes were likewise in progress at Torquay and the rural areas in the immediate vicinity, and also at Exmouth, Plympton, Honiton, Exeter, and elsewhere. In regard to Devon generally, it was satisfactory to be able



Congregational Church and Church Hall, Shirley, Southampton. MESSRS. PEARSON & BURRELL, Architects.

to report that the county council had taken up the question of regional planning very strongly in connection with building lines. The County Council was to be recommended to inaugurate a general survey of the county with a view to laying down a uniform scheme for road improvement on the various classified roads and third-class roads of the county, and it was only a question of time before the whole of the South-West District would fall into line.

Mr. C. Owen Baines, engineer and surveyor to the Paignton Urban Council, read a paper entitled "Twenty-Two Years' Progress in a South Devon Seaside Resort." This embodied the story of the rapid rise of Paignton to popularity. The whole of the sea front (said the lecturer), greens, and foreshore at Paignton belonged to the Council, which also had in its possession Preston green and foreshore, lying to the north of Paignton beach, and all with the exception of a very small portion of the land lying between the Great Western Railway and the sea, with the foreshore, at Goodrington Sands. The action of the sea in south-easterly gales along that part of the coast was severe, and frequent repairs had to be made to the embankment carrying the promenade by means of reinforced concrete bases or toes under the apron. With regard to housing, the subsidy scheme under the 1923 Act had been instrumental in providing 134 houses, and had been the means of relieving, to some extent, the acute housing problem in the town.

In the course of the discussion upon Mr. Baines's paper, the Chairman asked whether the Paignton subsidy scheme, which granted the subsidy to the prospective purchaser instead of to the builder, had any detrimental effect upon the number of houses erected in the town. He pointed out that a large number of Paignton builders had gone to Torquay, where there were no fewer than 750 subsidy houses, because they received the grant direct.

Mr. Baines replied that he did not believe the Paignton scheme had resulted in the loss of one house. The only trouble they had was in the acquisition of land.

Local Land Charges.

A Circular issued by the Ministry of Health draws attention to the amendments of section 15 (Part VI) of the Land Charges Act, 1925, made by section 7 of the Law of Property (Amendment) Act, 1926, and by the Schedule referred to in that section. The amendments are intended to remove doubts which had arisen as to the interpretation of the provisions relating to local land charges in the principal Act. A copy of the Circular may be obtained from H.M. Stationery Office, price 2d. net.

Mr. Alfred Gilbert.

Mr. Alfred Gilbert, chiefly known to the public as the sculptor of the Shaftesbury Memorial Fountain, and who recently returned to England, has lived a quiet and almost secluded life at Bruges since about 1907, the date of his last contribution to the Royal Academy. He is reported to be preparing to complete the tomb of the Duke of Clarence. It is hoped he may once more be represented at the summer exhibitions.

Garden Cities and Town Planning Association Tour.

The Housing and Town Planning Tour No. 4 of this Association will be this year to the Midlands, and will include the cities of Leicester, Nottingham, Sheffield, and Rotherham. The party will leave London on Friday evening, September 17, and after a visit to Leicester will spend the week-end in Nottingham. The tour will be continued to Sheffield and Rotherham, and visits will be made to several colliery villages for an inspection of the housing conditions, both pre-war and post-war, in those villages. The tours are arranged to meet the needs of architects, surveyors, officials and members of local authorities, and persons who are interested in the subject of housing, town planning and civic development. A full programme, and particulars as to cost, &c., will be sent on application to the Secretary, 3, Gray's Inn-place, London, W.C.1.

THE COLOUR DECORATION OF BUILDINGS

EXTERIOR AND INTERIOR PRESERVATION, PERMANENCY AND BEAUTY.

By R. A. WILSON, A.R.C.A. (Lond.).

THE decoration of buildings resolves itself into two branches—exterior and interior. Preservation of property, permanency of pigment, beauty of surface texture, and harmonious colour arrangement, are the prime considerations in all colour decoration, no matter whether outside or inside. Permanency is one of the essentials of exterior decoration, and protection the other. White lead is one of the most permanent pigments that we know, so if any exterior decoration can have lead in the mixture of the paint used, so much the better. In any case it is a wise plan to use lead in the under coats, irrespective of the finish. Raw and boiled linseed oil are the best mediums, with a dryer and just enough turpentine to allow the paint to work freely. Boiled linseed oil in itself desiccates more quickly than raw, and hence needs less dryers. An application of good outside varnish on woodwork which is handled, allows washing and revarnishing from time to time if necessary.

Where a powder pigment is used for final coatings, a binder of goldsize or goldsize and varnish is employed, with turpentine to thin out to working consistency. As this dries matt it is generally varnished.

Beyond these material considerations there

is the question of taste in colour and treatment. These are already fairly well standardised in outdoor decoration, the chief variations I have noticed being in the inauguration by a large colour manufacturing firm of a competitive scheme for the colouring of their exterior premises, and the treatment in more unique combinations of colours than are usually met with of certain other business premises and shops. The use of various coloured glazes, such as a transparent blue stippled over white, &c., has recently been greatly employed, and where glazing is surrounded by plain painting a very satisfying appearance is produced. Of standardised treatments I need only mention the black and gold banks, the vermilion and white of the meat salesmen, the white and blue of the fishmongers, and the dainty colour schemes of many of our tea shops.

When we come to interior decoration, protection against wet and strong effect of sunshine is not so important, although these must sometimes have some slight consideration. Various coloured distempers are freely employed on walls and ceilings, but as these invariably absorb moisture they will decay and mould away, if there is continual dampness, paint or wallpaper being more desirable in such cases.

Woodwork that is frequently touched by the hands is often varnished to allow washing. Splendid effects can be produced by the contrast of matt surfaced walls against highly varnished coloured woodwork, especially when the latter is treated with such strong pure colours as vermilion and ultramarine, and sometimes black. If white, a surface coat of enamel is more often employed than varnish, which sooner or later yellows a white surface in some degree.

Colour understanding and application for indoor and outdoor purposes is no easy problem, but much can be done by a grasp of the simple theory of contrast and juxtaposition of shades, rich full colours and tints. Instead of relying on certain stock schemes of treatment, such as Indian red or chrome green picked out with black, and enriched by yellow or gold, all kinds of original schemes can be evolved from a knowledge of the related possibilities of colours.

Take, for instance, the primary (red, yellow, blue) and secondary (orange, green, violet) colours, arrange them in diagrammatic form, and we have a circle of twelve hues, which make a good foundation or starting off point for colour study and use. (see Diagram). Circles of colour paling out to white, called tints, and darkening down to black, called shades, can easily be made from this scale of saturated maximum colours, and their use follows theoretically the same laws of interval and juxtaposition as the normal standards.

Pairs of opposites or complementaries are red and green, orange and blue, yellow and violet, &c., but harmonic dyads or couplets are red and blue-green, orange and blue-violet, yellow and red-violet, &c., the second colour of each pair being removed one to the right on the circle working clockwise from the complementary. This idea is based on a theory analogous to the diatonic scale of modern music, and it is interesting to note that children in their colour studies, and primitive tribes in their colour schemes, often use these same couplets of harmonic colours.

In all colour harmony, the first note of the scale should govern by proportion or intensity, the other notes being subservient to this initial note. Taking harmonious triads (threes) and starting with red as the foundation note, blue-green (No. 2) will be the strongest harmonic opposite, and yellow (No. 3) the linking up or binding note. The positions and arrangement of these three notes of a red scale gives us the clue to the selection of all other harmonies of two's or three's, and to make our diagram easy for selective purposes, the emphasised triangle should be cut out (or another made) and allowed to revolve clockwise on its centre, No. 1 angle in each case giving us the tonal or starting colour. The dotted triangle shows a triad based on orange. For colour in harmonies of seven (diatonic scale) I need only give one example based on red, to illustrate the method of selecting the remaining four colours, which are added to the triad in each case. The full scale consists of red, *orange*, yellow, *yellow-green*, blue-green, *blue-violet*, *red-violet*, the *underlined* notes being the added four.

Black, grey, white, gold, and silver can all be usefully employed to isolate, emphasise, and heighten colour; middle neutral grey, and white in some cases, being excellent backgrounds for almost all colours. In schemes where all pure colours would be too luxurious or gaudy, a grey or a neutralised colour in place of, say, blue, green, or violet (cold colours) may sometimes lead to success.

Shades, normals, and tints combined in a scheme can be quite pleasing and impressive. Imagine a yellow tint for walls, with pure or greyed purple woodwork, and dark blue carpet, linoleum, or black stained floor. This would make quite a cheerful luminous effect. Again, blue walls with woodwork yellow-orange pure, or neutralised to sienna or an umber tint, and a rosy red carpet or hangings. A peaceful room, indeed, with cheer in the rosy note; wild-rose pink walls, green woodwork (grey if too rich or black if effectiveness is desired), yellow in hangings and cushions, and say, a nutbrown carpet or brown floor stain. A stimulating and active impression would be given by such a colourful room.

THE BRITISH ASSOCIATION

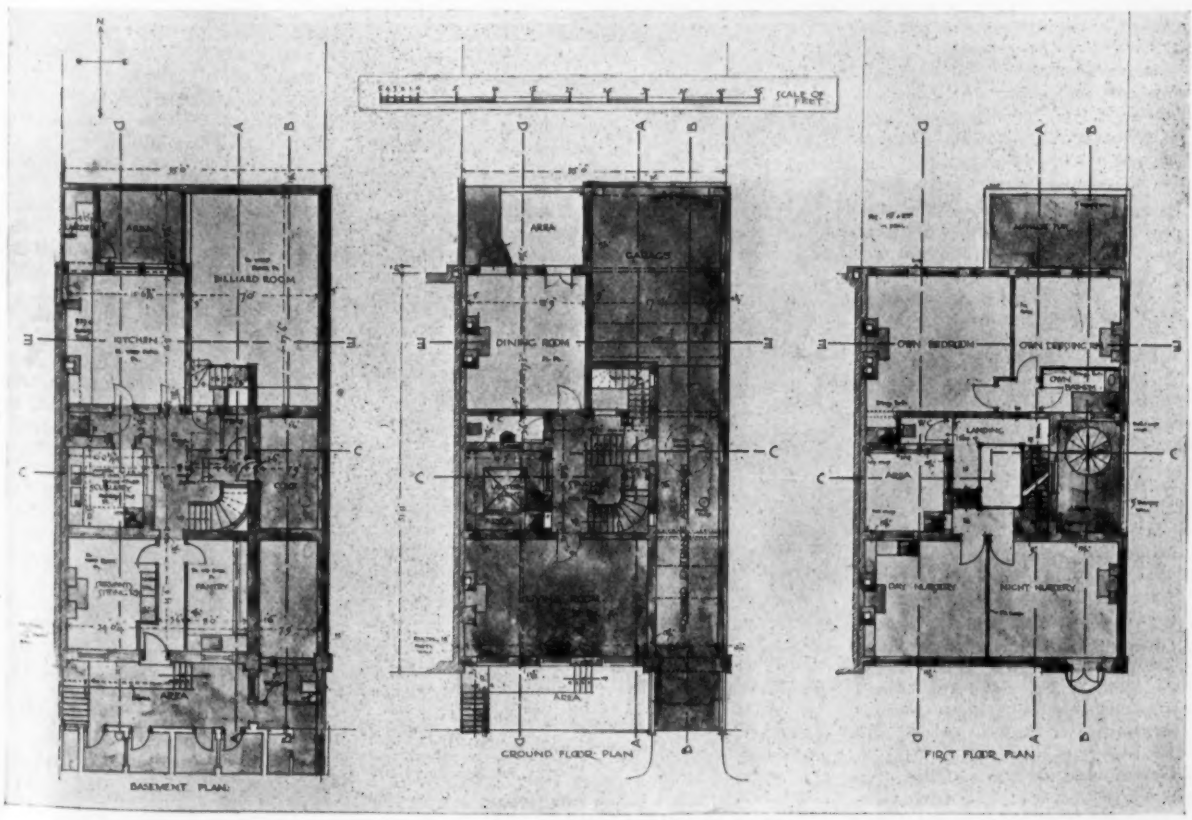
AT the annual meeting of the British Association, which opened last week at Oxford, the Prince of Wales, in the course of his presidential address in the Sheldonian Theatre, said that a recent report of the Committee of the Privy Council for Scientific and Industrial Research showed that under the Department there were eleven research boards, which co-ordinate and govern researches in chemistry, fabrics, engineering and physics, radio, building, food-investigation, forest-products, and fuel; and to these were to be added the board of the Geological Survey and the executive committee of the National Physical Laboratory. Under the general supervision of the Advisory Council there were upwards of 20 industrial research associations, formed in alliance with the same number of the principal industries of the country, for the purposes of scientific investigations connected with those industries. The Building Research Board was created in 1920, and in 1925, at the request of the Ministry of Health, considerably extended its activities. Researches were concerned with the study of materials from the chemical and geological aspects, their strength, weathering, moisture condensation on wall coverings, acoustics, and various other problems; these inquiries, together with the collection and supply of information, represented "an attempt to create a real science of building, to explain and supplement the traditional knowledge possessed to-day in the industry. It could scarcely be questioned, said his Royal Highness, that industrial Britain inherited a legacy of discomfort in the housing of its workers, with all which that implied, dating from a period when the building of the home lacked scientific as well as æsthetic guidance. We needed that guidance no less to-day, when the saving of labour was one of the main objectives of the "ideal home" and its fitments.

Value of Regional Surveys.

A conference of delegates from societies in correspondence with the British Association was addressed by its President, Sir John Russell, on "Regional Surveys and Scientific Societies." He commended regional survey work as a sphere in which the amateur worker could find full scope for his activities and his wide outlook. Perhaps the greatest value of a regional survey was that it aroused an interest in the countryside, to be followed, it must be hoped, by a desire to keep the best of what we had. The countryside of England was rich beyond all others in human and artistic interest. Some of the generations had added much to the countryside before they left it. The great roads made by the Romans; the clearing of the forest by the Saxons, who founded nearly all our villages and towns; the wonderful churches of the Normans and those who followed for the next 400 years; the beautiful houses and cottages of Jacobean times; the mansions and gardens of the eighteenth century—many of these had come down to our own day, tended by the men who held them for a while and then passed them on to us. What were we doing with them? Happily, for the most part, looking after them well. The churches in particular were cherished and safeguarded against the terrible churchwarden restorations that ruined many a beautiful church in the nineteenth century. Other important buildings listed by the Historical Commission, though not absolutely safe from neglect or destruction, were at any rate looked after by someone, but many beautiful relics of the days of the craftsmen, wonders in wood and iron and stone, were not and perhaps could not be fully protected. Yet, if once lost, they could not be replaced, and, unfortunately, the civic conscience was not always alert to look after these things. It was one of the difficulties of democracy that the generations of voters were so short that there was scarcely time to educate them. It was not only our fine old specimens of handicraft that were in danger. The rapid spreading out of the towns into the country was necessitating the erection of houses in all sorts of places, worst of all in long, narrow streaks along the omnibus routes. Some people made two houses, one for the week-end and one for the middle of the week. At present anyone might build anywhere and anything, so long as it be of good brick or stone and conformed to the local by-laws about the drains. It was an ill-notion of the "New Jerusalem" to set up a lot of incongruous bungalows and little villas with asbestos-tiled roofs devoid of any trace of craftsmanship, and scattered over the countryside regardless of their effect on the landscape. The educated middle classes, however, knew better, and they were building houses of artistic value, unobtrusive and fitting in well with their surroundings; and, happily, their example was infectious. Some of the cottages recently put up by the local authorities in the villages were very attractive and would improve with age.

The Future of Electricity.

The present and future development of the supply of electricity was dealt with in an exhaustive paper in the Engineering Section by Sir John F. C. Snell, president of the section. The lecturer showed that the amount of electricity now generated in Great Britain, omitting privately-owned generating stations, amounted to about 7,000,000,000 units annually, of which 5,069,000,000 were sold by authorised undertakers, the balance being required for railway and tramway traction purposes. In recent Government publications it had been estimated that the output in Great Britain within the next fifteen years might reach a total of 21,000,000,000 units, or an even higher figure, if electricity systems fulfilled the requirements of a more extensive railway electrification. Sketching the probable scope of electrical development in this country under the three heads of (1) domestic supplies, (2) industrial power, and (3) railway electrification, Sir John estimated that, taking the factors which he mentioned into consideration, the total output for domestic requirements twenty-five years hence, including residential premises, shops, offices, and public places, might be estimated at not less than 20,000,000,000 units, with a maximum load of 8,000,000 kilowatts. If the majority of our industrial works derived their supply from public systems we should expect a future output for industrial purposes of not less than 20,000,000,000 units, with a maximum load of 9,200,000 kilowatts. There were, he said, possibilities of great expansion in railway electrification. Calculations made by the Ministry of Transport of the total consumption by British railways, if the whole of the lines were electrified, showed that the result would be a total of nearly 7,000,000,000 units, a figure almost identical with a similar consumption on the United States railways.



House at 21, Cheyne Place, Chelsea.

MESSRS. DARCY BRADDELL, F.R.I.B.A., AND HUMPHRY DEANE, Architects. (*See also* Inset Plate.)

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ILLUSTRATIONS

House at Grayshott, Surrey.

The owner having often to be away from home, this house, garage and cottage were designed in one block, with the cottage communicating with the house on the first floor over the garage, so that those living in the cottage can act as caretakers of the house. The garage does not communicate with the rest of the building and has a fireproof floor over it. The building runs parallel to the rather steep slope of the ground, and the necessary basement on the lower side provides garden and store sheds. The walls externally are built with many-tinted bricks. The roofs are tiled and the gables have black weather-boarding. Messrs. F. Milton & Sons, of Witley, were the builders, and Messrs. Coxhead & Welch, of Grayshott, carried out the electric light work.

Mr. E. J. May, F.R.I.B.A., was the architect.

Design for a Country Church in Wales.

This design won the architectural prize at the Royal National Eisteddfod of Wales, held at Pwllheli last year. The subject set was a place of worship to hold 350 persons and suitable for a Welsh country district.

Mr. R. T. Beckett was the architect.

21, Cheyne-place, Chelsea.

This house, designed for Mr. Eric Burt, a partner in the firm of John Mowlem & Co., is built at the top of Swan-walk, looking south over the Apothecary's Garden and the river. Three main conditions were laid down before building, as follows:—(1) The plan must contain a garage with an absolutely private entrance, so that a car could be taken to bits, if necessary, without constant interruption and annoyance from the street; (2) the house was to be not more than two stories high, exclusive of the roof; (3) servants' quarters could be planned in a basement as long as they were perfectly lighted. The street frontage is very simply designed, the influence of the Pensioners' Hospital on its treatment being observable. All the brickwork used on this front is from Forest Row, Sussex, and is of a reddish-brown colour. The gates are painted a bright green; the rest of the woodwork and cornice are white, and the roof, Mansard in form, is covered with Lombardic tiles. The street railings are faithful copies of those used by Wren all along the Hospital-road.

Messrs. Darcy Braddell, F.R.I.B.A., and Humphry Deane were the architects.

Yorkshire House, Cross-street, Manchester.

The Yorkshire Insurance Company, whose chief offices are in York and London, was founded in 1824, and for many years the Company have had offices in Manchester. A short time ago they decided to have a building of their own, and purchased a site in Cross-street at the corner of Tib-lane. The scheme for the building provides for shops on the ground floor with lofty basements. The general office and the board room of the Company have been placed on the first floor, the other departments, such as the Marine, etc., occupying part of the upper floors; a large strong room and store room for the use of the Company is provided in the sub-basement. The building will be faced with Portland stone, and the Mansard roof will be covered with grey slates with a lead cresting and acroteria. Inside, the walls of the entrance corridor, staircase and the offices of the Company will be panelled in walnut to a height of 8 ft. The floors of the entrance corridor, landings and the public space in the general office will be covered with marble. Generally, the floors of the offices will be finished in cement for covering with rubber or linoleum. The contract for the building has been let to Messrs. G. Macfarlane & Son, Ltd., of New York-street, Manchester, whose sub-contractors are:—Bricklayer, J. H. Billings & Co.; mason, Moore Bros.; slater, W. Royle & Co.; plumber, Jaffrey & Co.; plasterer and painter, J. & A. Hart; all of Manchester. The steelwork has been let as a separate contract to Messrs. Redpath Brown & Co., of Trafford Park, Manchester.

Messrs. Frank P. Oakley & Gerald Sanville, AA.R.I.B.A., are the architects.

Doncaster Hospital Competition.

We illustrate this week the first and second premiated designs in this competition, by Messrs. Adshead, Topham & Adshead, and Messrs. J. H. Morton & Son respectively. The full awards of the assessor, Mr. Thomas R. Milburn, F.R.I.B.A., are given under Competition News on page 236.

Following are some particulars of the winning design: The main points aimed at in designing the scheme have been the placing of the technical services and their approaches, these being well cut off from the ward blocks, but within easy working radius, and the planning of the administration block with its arrangement for easy extension; the kitchen department and the dining and recreation rooms for nurses and servants being planned for the full scheme as more economical than extending later.

The whole of the buildings will be of fireproof construction. The external facings will be hard pressed bricks with sparingly used stone dressings; sloping roofs will be covered with grey green slates and flat roofs finished with rock asphalt. Internal walls generally will be plastered and distempered for painting later, with "Biancola" dadoes 5 ft. high to lavatories sink rooms, duty rooms, &c. Ward floors will be 1 in. hard wood blocks or "Granwood," wax polished, and finished against walls with coved skirting blocks. Laboratories and dispensary floors will be acid proof asphalt with terrazzo border and coved skirting. Windows will be double-hung sashes and frames, those to ward blocks having the upper part opening as hoppers. Covered ways will have concrete paths and slated or asphalt roofs supported on wood posts and bearers. Heating will be by means of forced hot-water circulation through pipes and radiators. It is suggested that two producer gas fire boilers of locomotive type be used, burning Yorkshire smudge fuel, obtained from local collieries. Hot water will be supplied from calorifiers and will have accelerated service. The principal ventilation will be natural, by means of opening windows, and cooking will be by steam and gas.

The whole of the laundry machinery will be worked from a line shaft driven from engine room. Cold water supply tanks would be placed in the roofs of the ward blocks, and larger tanks in the roofs of the laundry and administration blocks. Fire hydrants will be fixed in suitable positions for dealing with fire in any part of the buildings. All the buildings will be connected to the administration block by telephone. Sanitary arrangements will be connected by an efficient drainage system to the sewer in Common-lane.

The architects' estimated cost for the whole of the work is approximately £65,300.

Congregational Church and Church Hall, Shirley, Southampton.

The somewhat narrow site of these buildings determined the plan, it being important that both the entrance to the church and church hall should face the main road. The main doors of the church are approximately 100 ft. back from the road. The first portion of the contract is the church hall and tower foundations. The hall has seating accommodation for 400 people. The whole of the interior woodwork is in Oregon pine, except the main entrance doors and vestibule doors, which are in Austrian oak. Following are the sub-contractors:—Roberts Adlard & Co., Italian roofing and tiles; Stevens & Adams, wood-block flooring; Adams & Adams, Southampton, heating on the low-pressure system; John Lysaght, Ltd., iron roof principals; Adamsez, Ltd., sanitary fittings; Carters, Poole, Dorset, floor and wall tiling; Crittall & Co., Ltd., non-rustable steel casements; Parker, Winder & Achurch, Ltd., door furniture; Brown & Broscomb, Bournemouth, leaded lights; Robert Boyle & Son, ventilation; Walter McFarlane & Co., rain-water castings; Hants Fibrous Plaster Co., fibrous plaster work; Best & Lloyd, Birmingham, electric light fittings; Bridle & Co., Bournemouth, electric installation; The Crowborough Brick Co., Sussex, facing bricks, hand-made kiln stock, purple-grey facings.

"Deanscote," The Bishop's Avenue, N.

Designed for Mr. William Cook, a partner in the firm of Messrs. Yates, Cook & Darbyshire, who acted as architects, this house occupies a good position in The Bishop's Avenue, N., and overlooks the Highgate Golf Course. The elevations have been designed in a restrained and simple manner. The plans clearly indicate the accommodation provided. The house is faced with Kent grey bricks with Portland stone dressings, and the low-pitched roof with its overhanging eaves is covered with Old Delabole slates. The house possesses modern conveniences, including central heating.

City of Nottingham Exchange Scheme.

The historical name of Exchange Row is to be retained in this new shopping way. Its plan is in the form of a T, connecting three main thoroughfares. It has a width of 28 ft., is 60 ft. high to the glass barrel roof, and 90 ft. to the glass dome at the intersection. It contains, in all, some thirty shops. The work is completely steel-framed, and the facing is to be in Bath stone, with bronze shop fronts and large composite metal windows over. The floor, in regular Portland stone squares, is divided up by black Belgium granite bands, and the glass barrel roof is treated with wrought-iron ribs. The four pendentives to the dome are 20 ft. high and are finished with four mural panels depicting local historical subjects.

The general plans and perspective drawings of the scheme were published in our issue of December 12, 1924, and the detail drawing of the front, illustrated, shows two typical bays facing the Great Market Square. The whole of the front is to be in Portland stone, with a Cornish granite base and steps. The windows, doors, grilles and lamps will be in bronze. The terrace frieze under the upper windows is to be carved in cherubs in low relief, to represent some of the ancient trades for which the city was noted in the past, and it includes tanners, weavers, woolworkers, bellfounders, brewers, ironworkers, potters, sculptors and miners. The main clock was originally shown on the tympanum on the main front, but it has now been arranged to fix this in the dome tower, thus leaving the whole of the tympanum free for sculpture. The design in this case is to portray the main phases of civic life and interest—that is, Law, Education, Health, etc. The whole of the sculpture work is under the control of Mr. Joseph Else, of Nottingham. The contract for the scheme amounts to £502,876, and the work was secured in competition by Messrs. F. G. Minter, Ltd., of Putney, London, S.W.15.

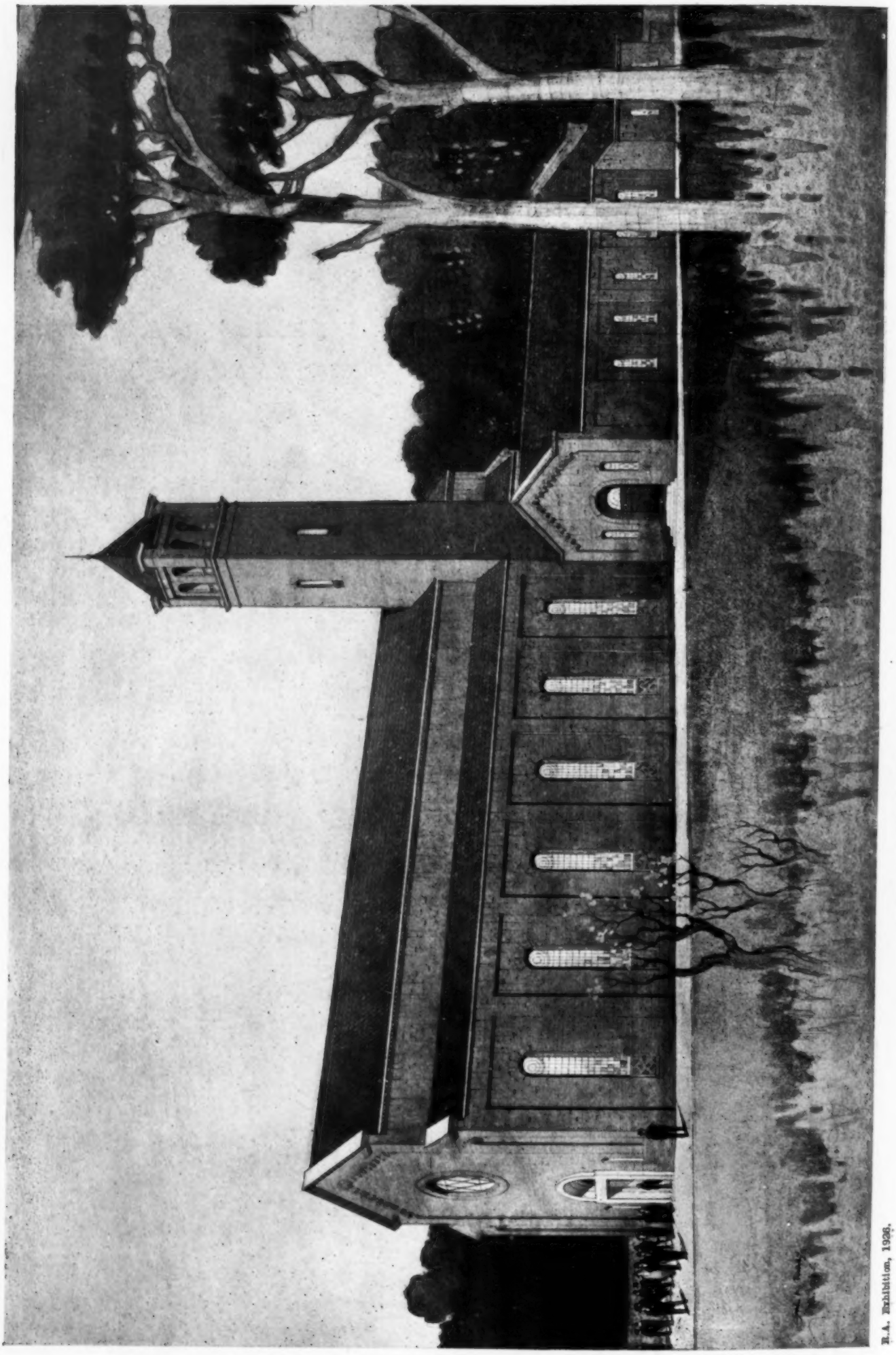
Mr. T. Cecil Howitt, A.R.I.B.A., is the architect.

Marine Bathing Pavilion, Margate.

A description of this work is given on page 255.

New Exchange Buildings, Nottingham.

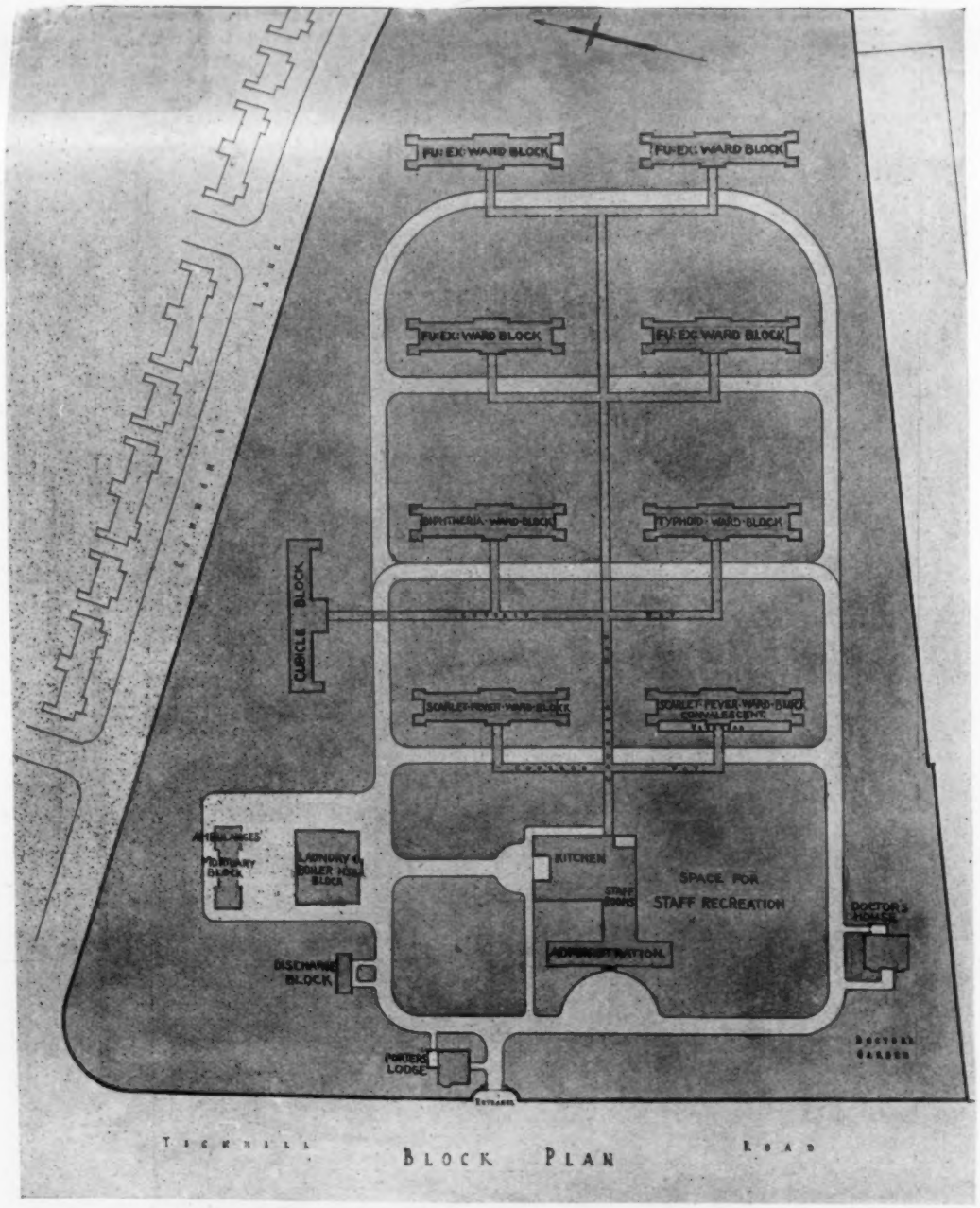
Mr. T. Cecil Howitt, A.R.I.B.A., Architect.



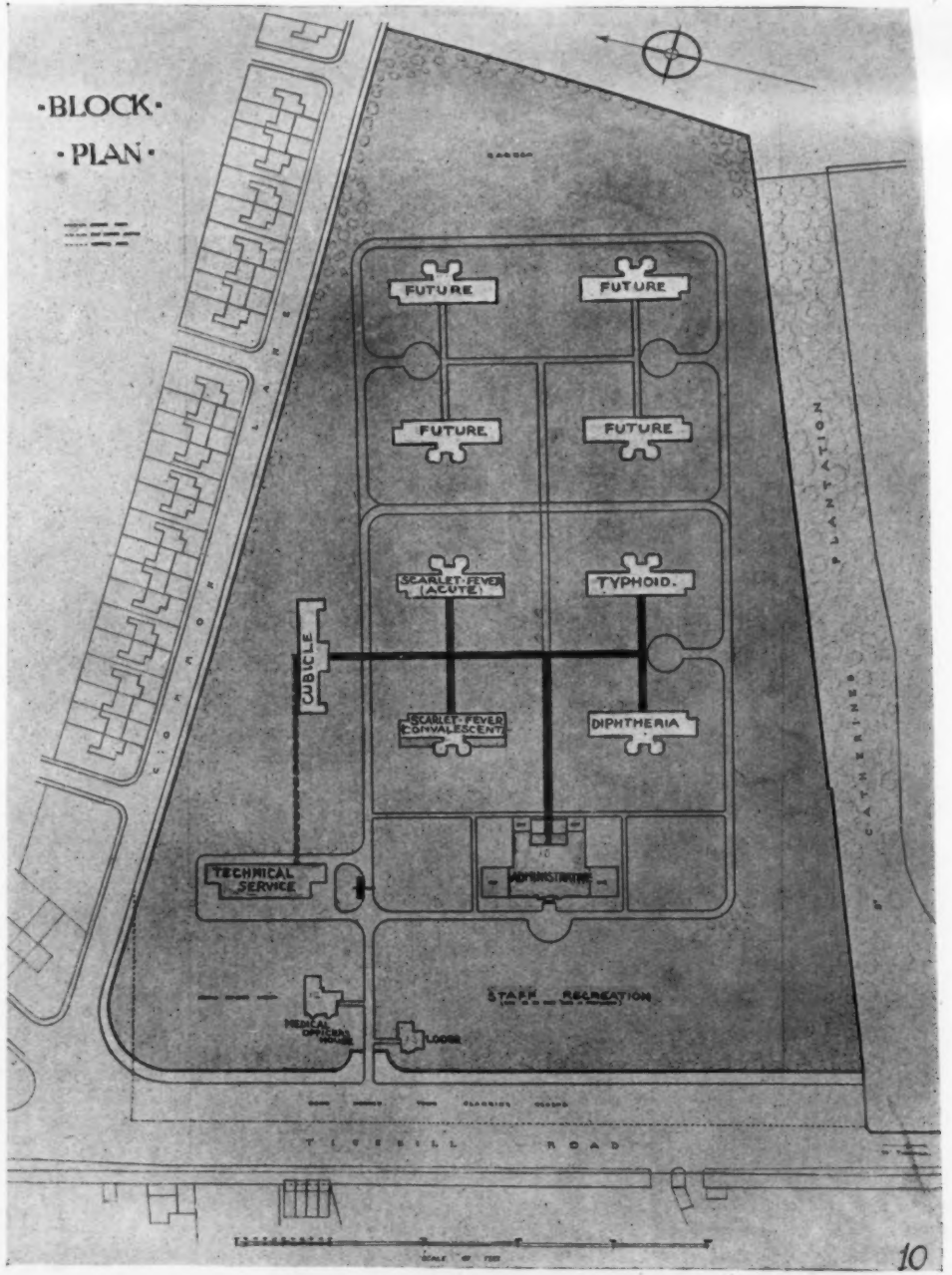
Congregational Church and Church Hall, Shirley, Southampton,

MESSRS. PEARSON & BURRELL, Architects.

R.A. Exhibition, 1926.

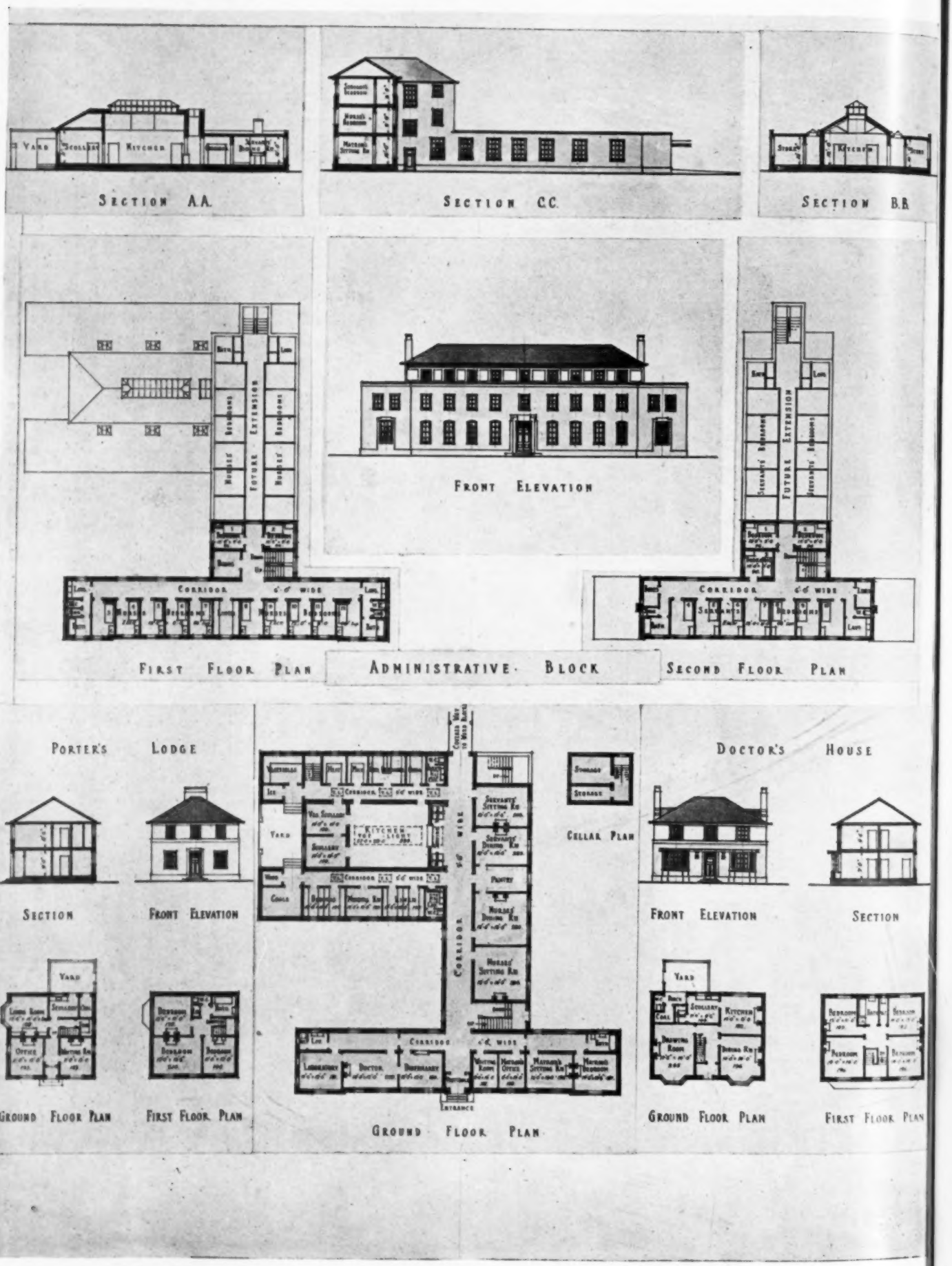


First: By Messrs. Adshead, Topham & Adshead.



Second: By Messrs. J. H. Morton & Son.

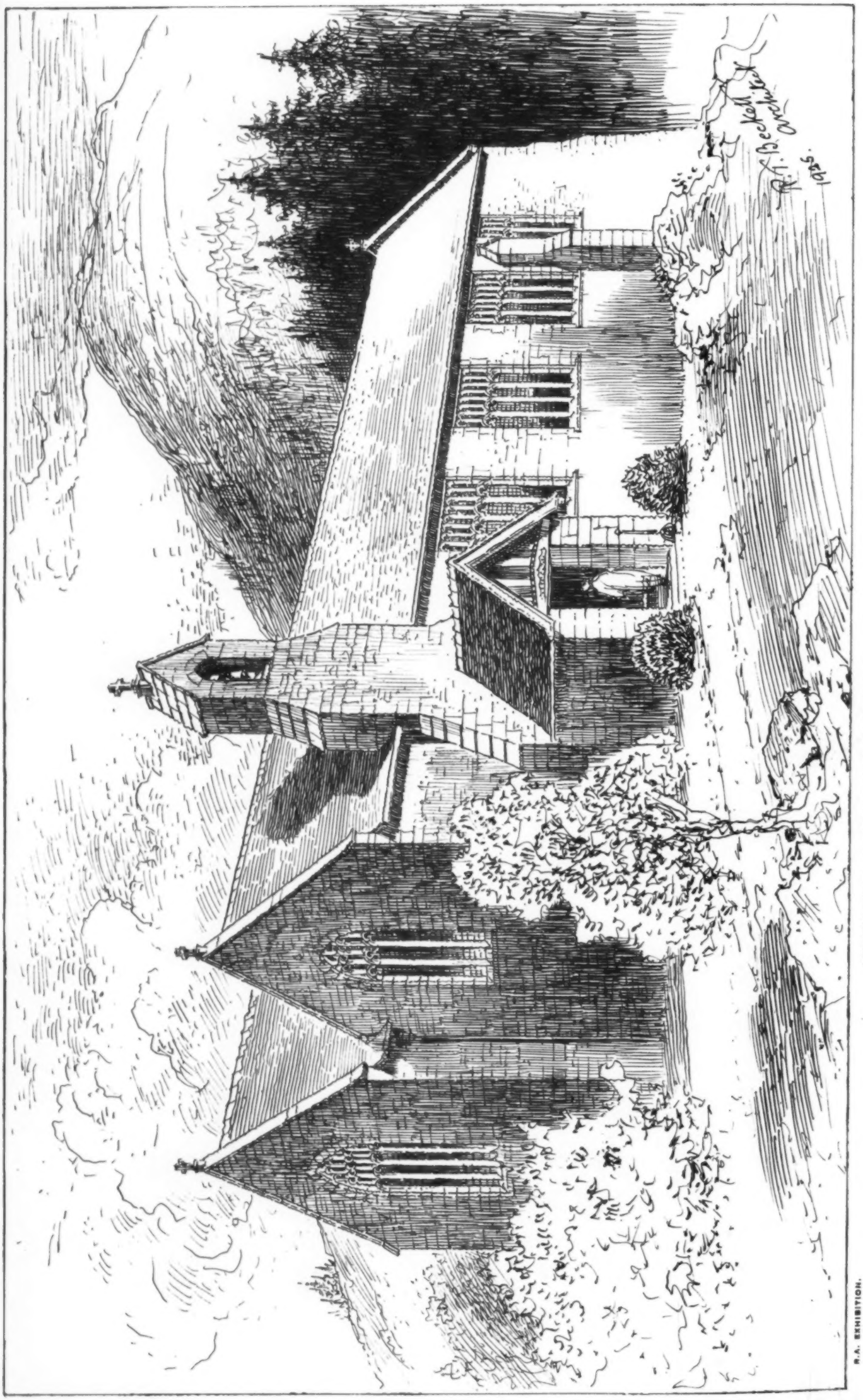
Infectious Diseases Hospital Competition, Doncaster: Block Plans of First and Second Premiated Designs.



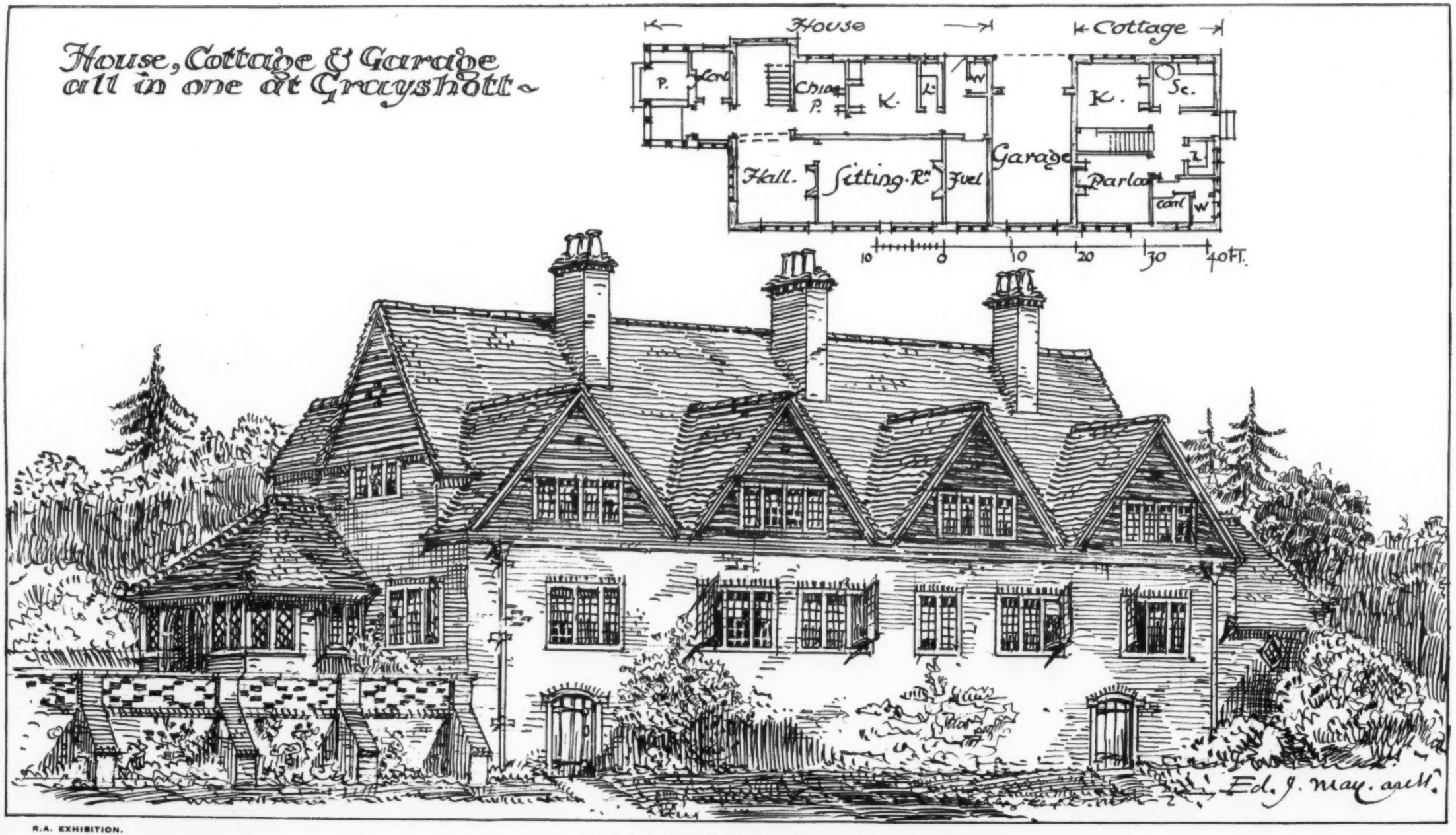
Infectious Diseases Hospital Competition, Doncaster: First Premiated Design.

By MESSRS. ADSHEAD, TOPHAM & ADSHEAD.

UNIV. OF MICH.

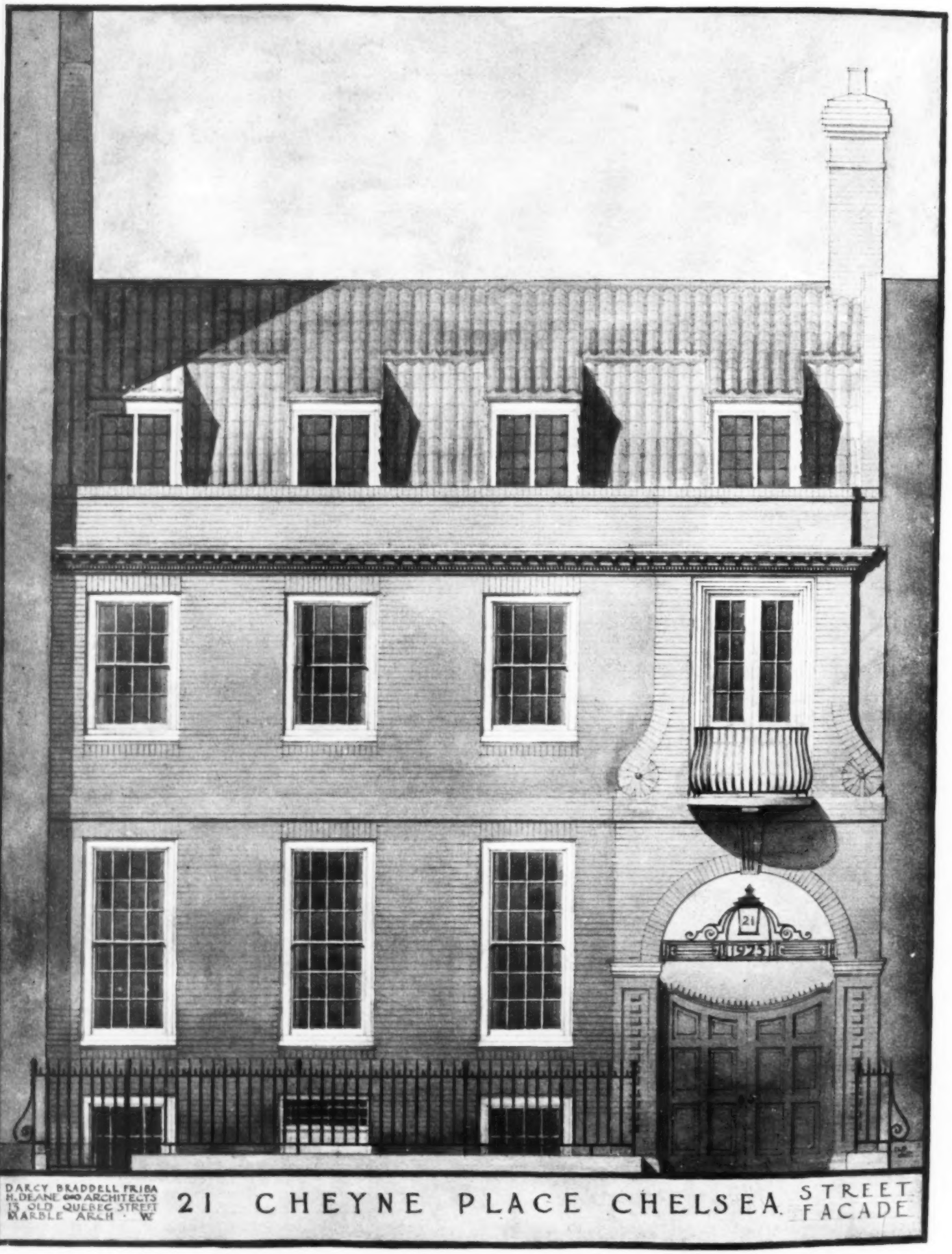


DESIGN FOR A COUNTRY CHURCH IN WALES, BY MR. R. T. BECKETT, ARCHITECT.
R.A. EXHIBITION.

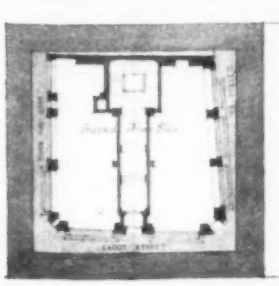


R.A. EXHIBITION.

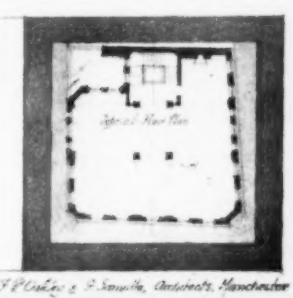
MR. EDWARD J. MAY, F.R.I.B.A., ARCHITECT.



MESSRS. DARCY BRADDELL, F.R.I.B.A., AND HUMPHRY DEANE, ARCHITECTS.



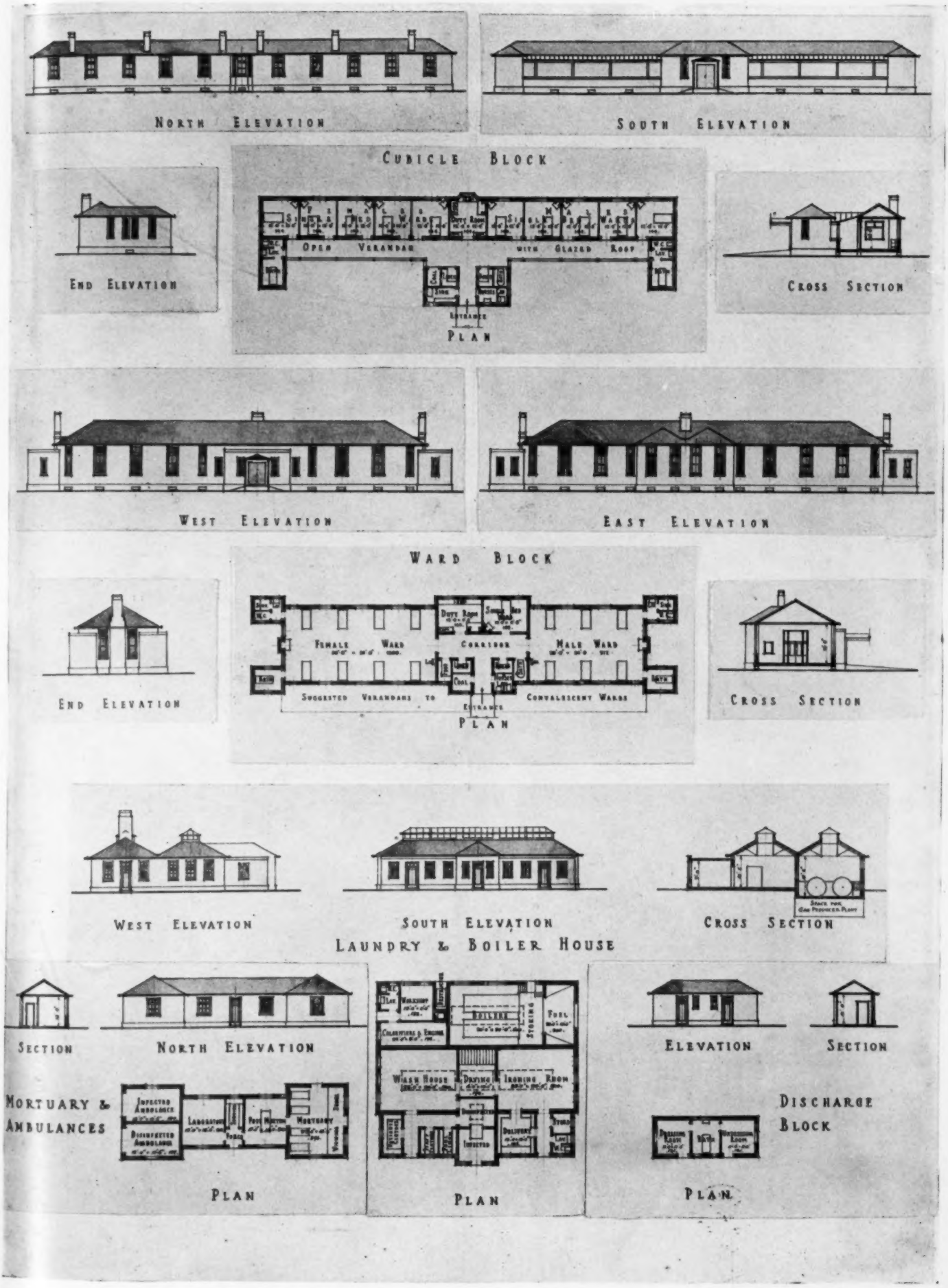
YORKSHIRE HOVSE,
CROSS STREET, MANCHESTER.
FOR THE
YORKSHIRE INSVRANCE CO. LTD.



F. P. Oakley & G. Sanville, Architects, Manchester

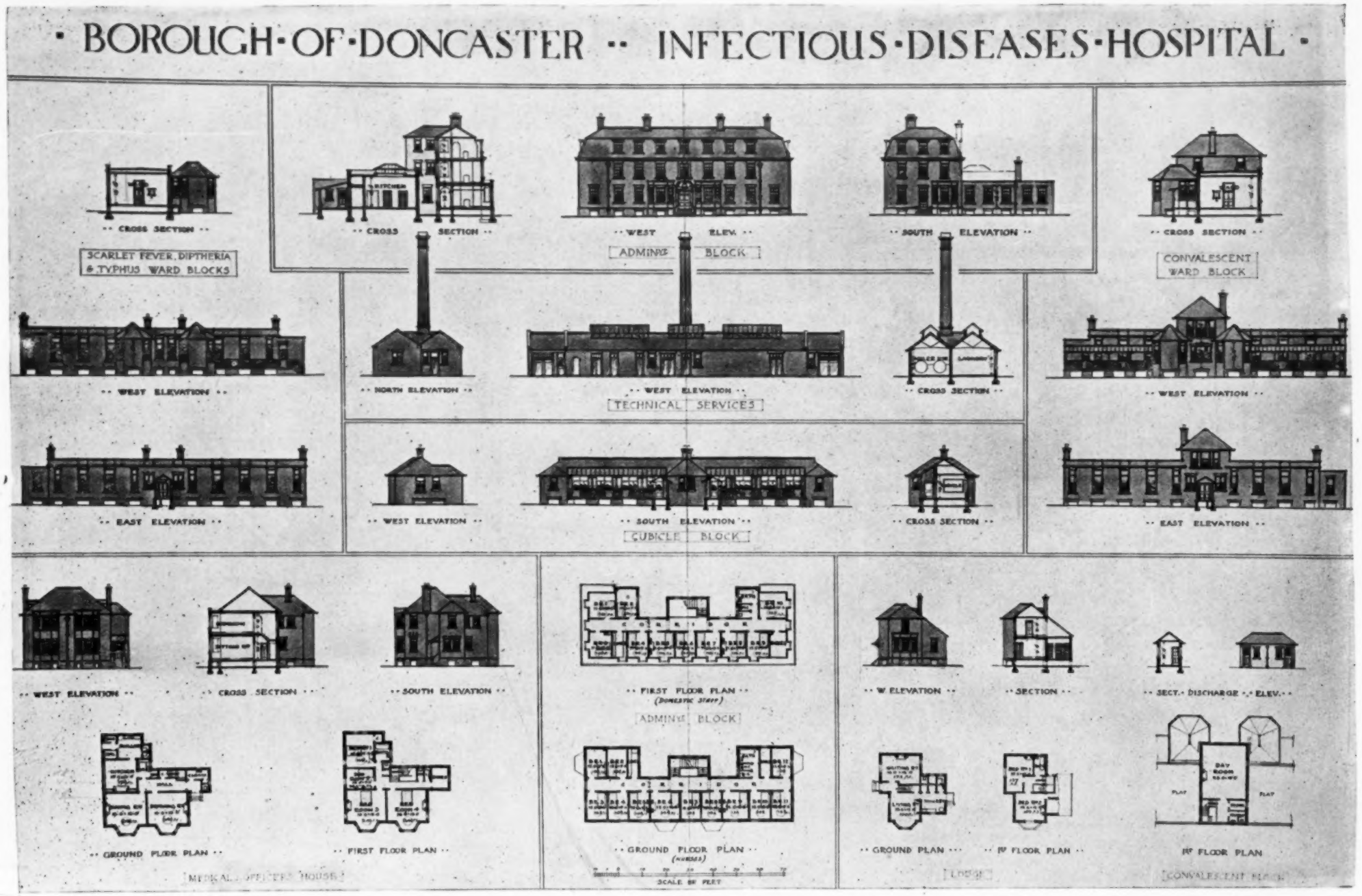
MESSRS. FRANK P. OAKLEY AND GERALD SANVILLE, AA.R.I.B.A., ARCHITECTS.

UNIV. OF MICH.

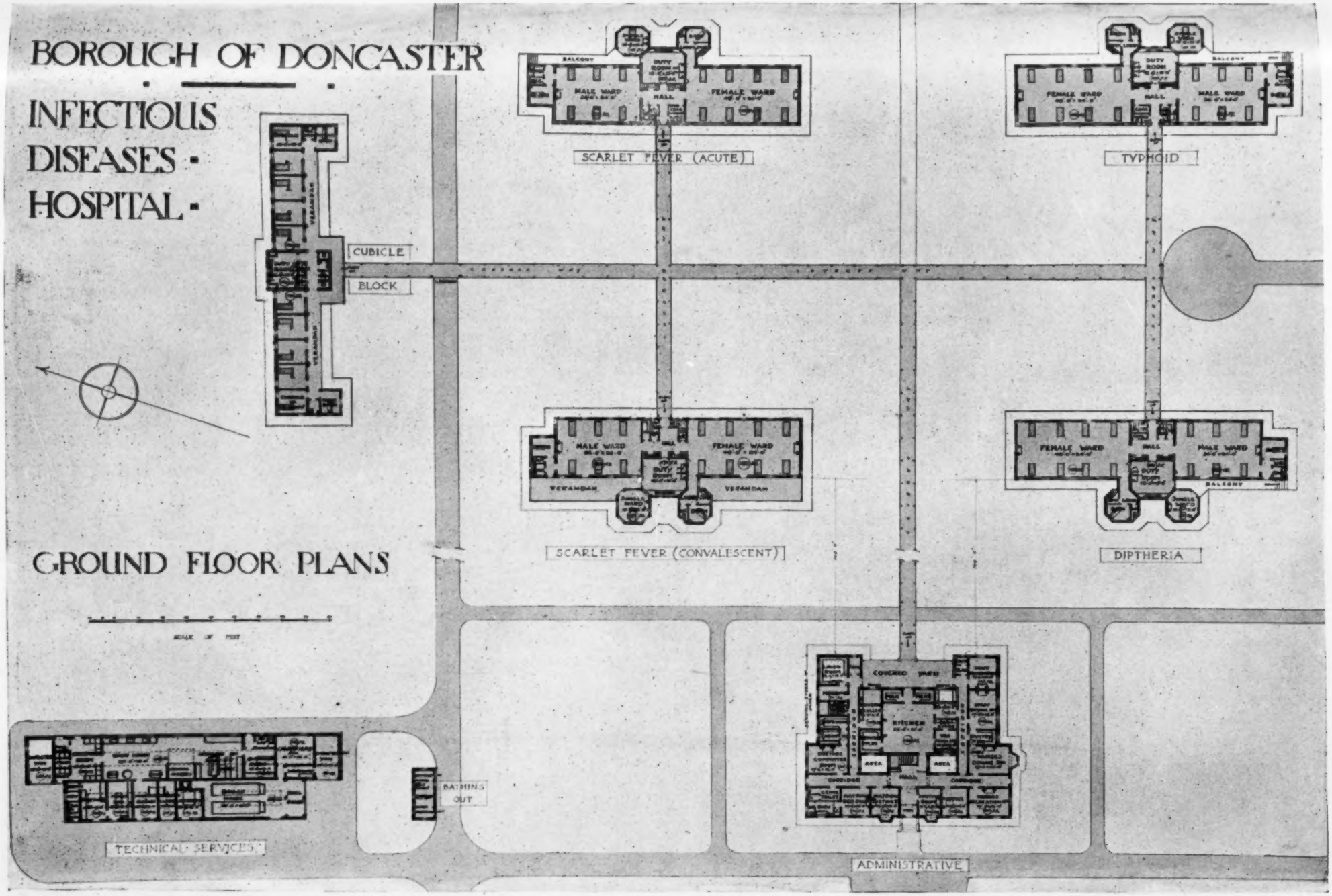


Infectious Diseases Hospital Competition, Doncaster: First Premiated Design.

By MESSRS. ADSHEAD, TOPHAM & ADSHEAD.

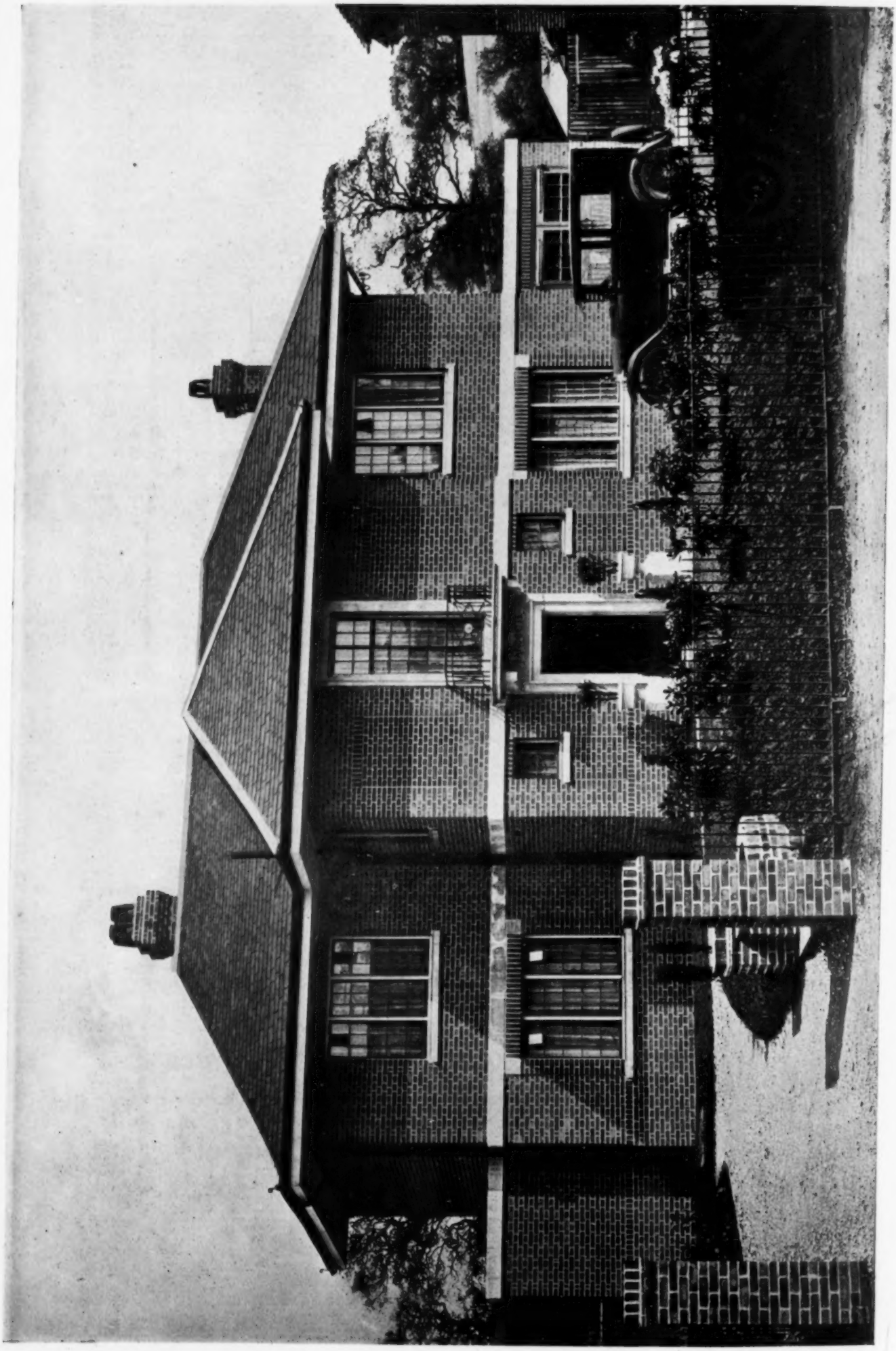


Infectious Diseases Hospital Competition, Doncaster: Second Premiated Design. By Messrs. J. H. Morton & Son.

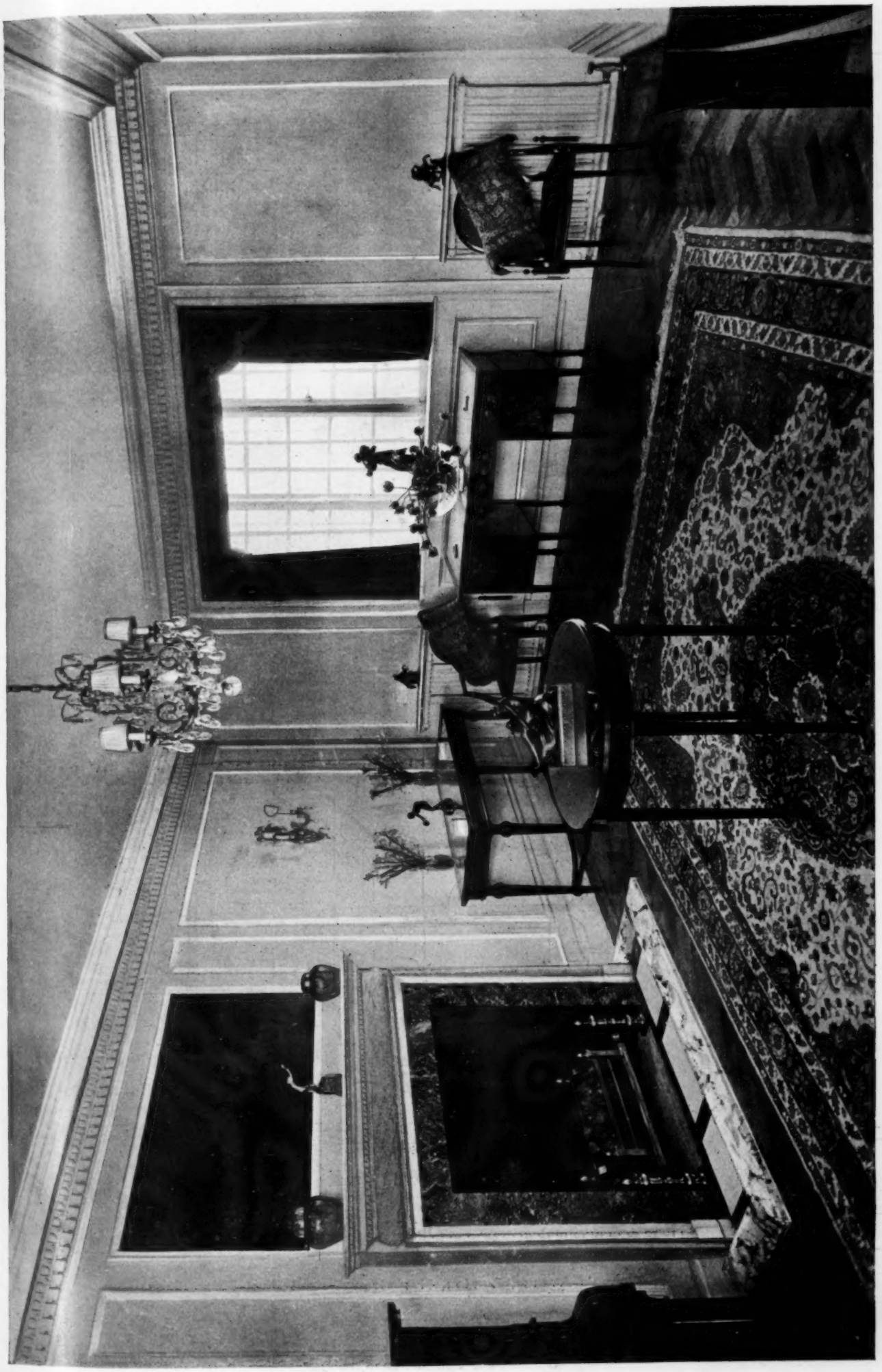


Infectious Diseases Hospital Competition, Doncaster: Second Premiated Design.

By Messrs. J. H. Morton & Son,

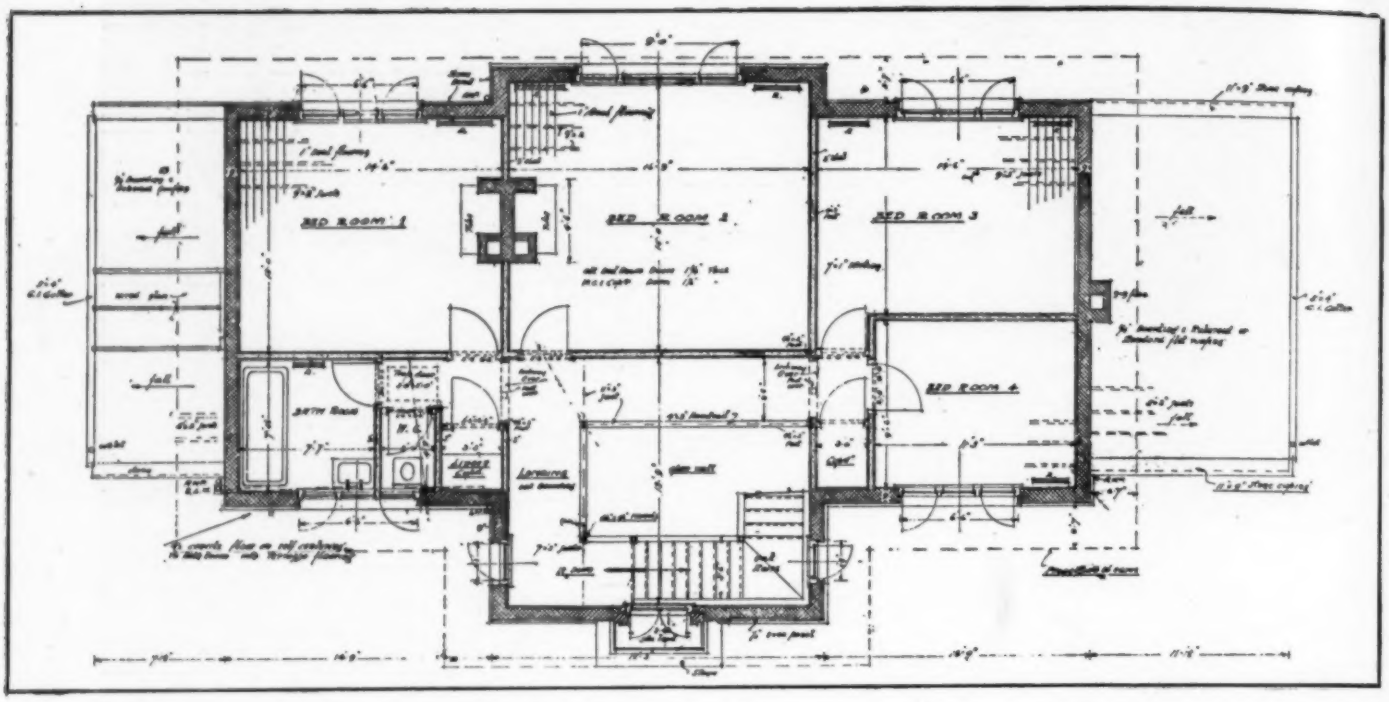


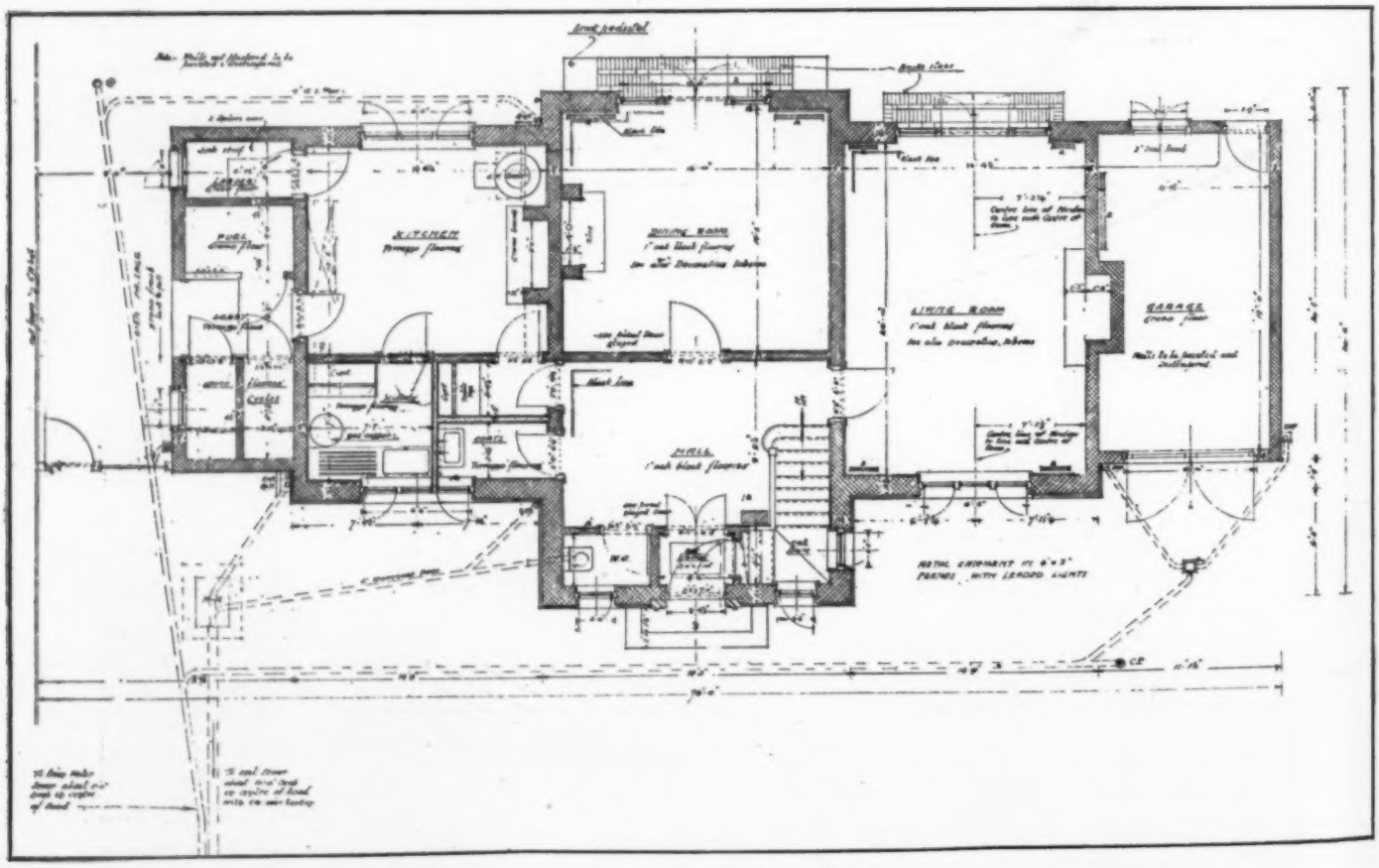
"Deanscote," The Bishop's Avenue, London, N.
MESSRS. YATES, COOK & DARBYSHIRE, Architects.



"Deanscote," The Bishop's Avenue, London, N.: Drawing-Room.

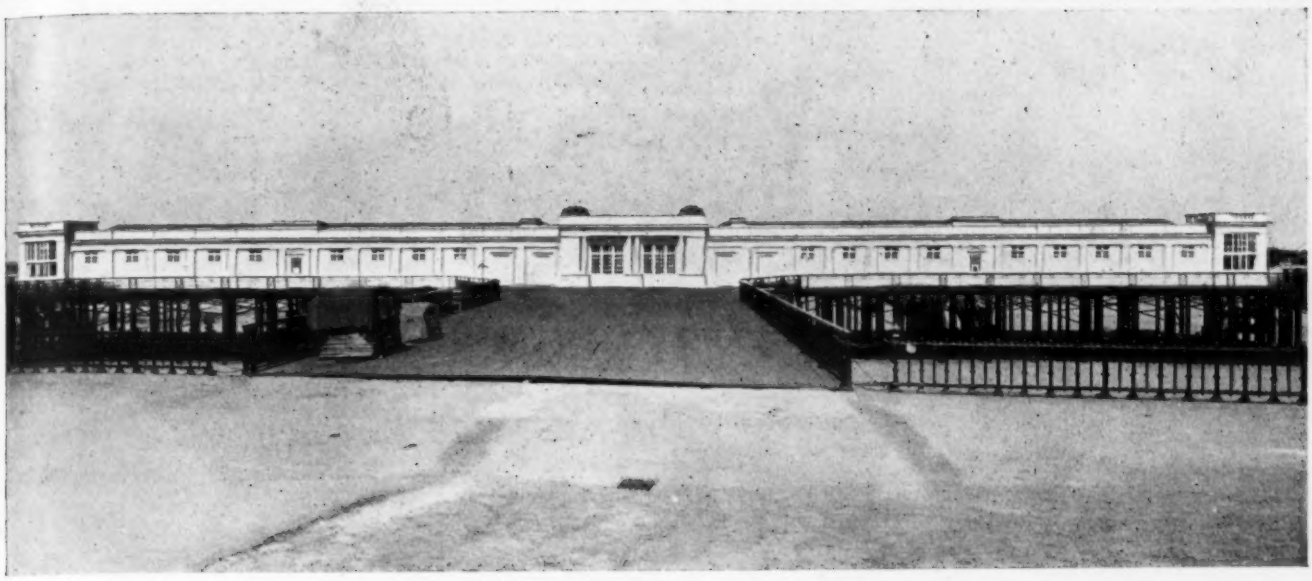
Messrs. Yates, Cook & Darbyshire, Architects.

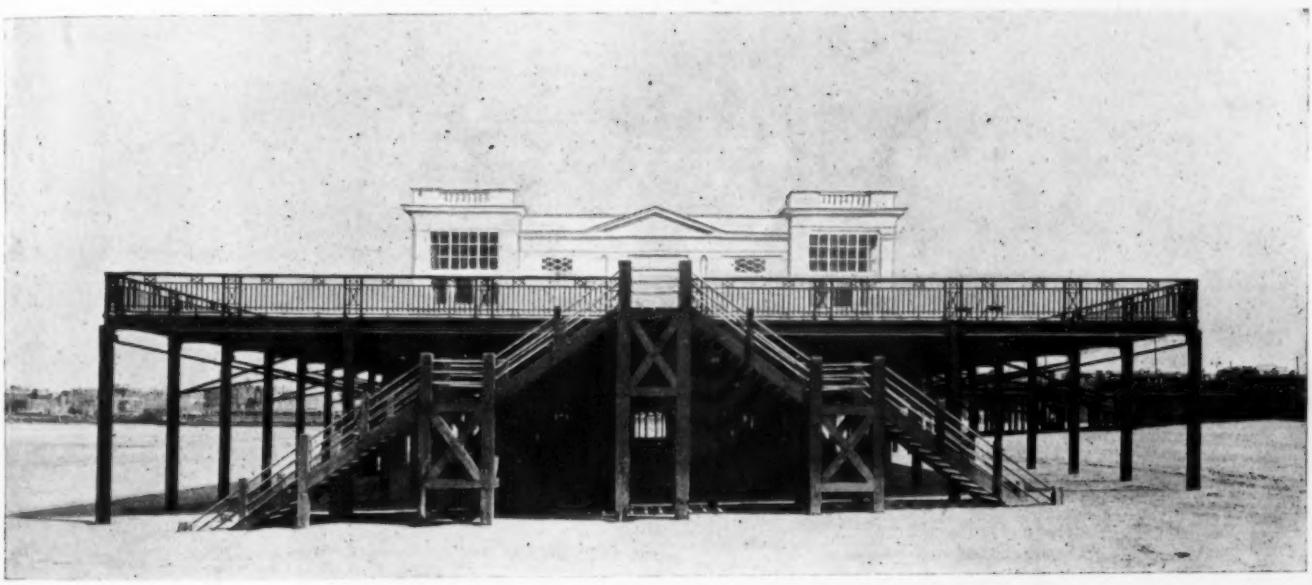




"Deanscote," The Bishop's Avenue, London, N.: Ground- and First-Floor Plans.

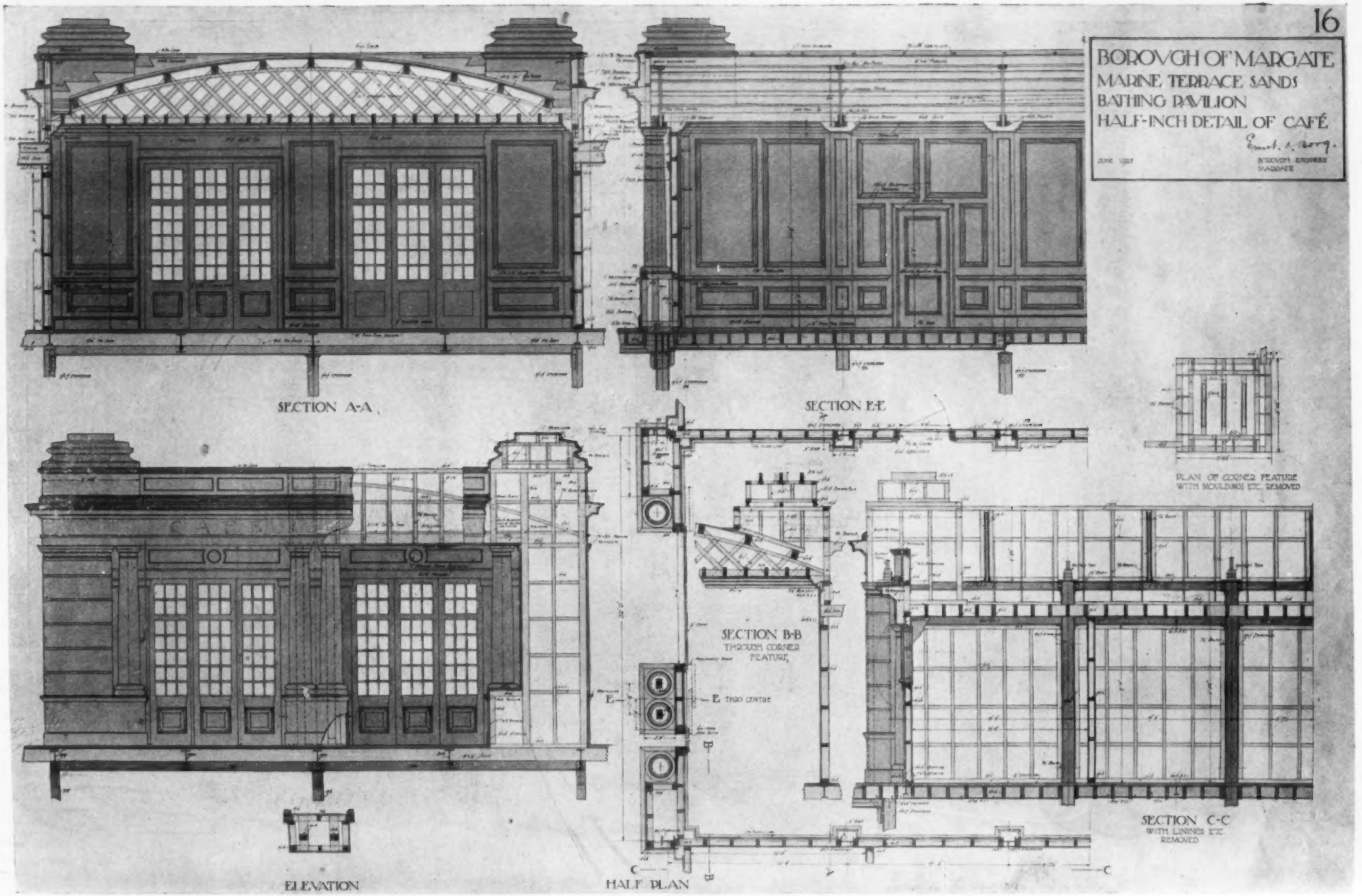
MESSRS. YATES, COOK & DARBYSHIRE. Architects.





Marine Bathing Pavilion, Margate.

Mr. Ernest A. Borg, Borough Engineer and Surveyor; Mr. G. C. Wilkins, Architectural Assistant.



Marine Bathing Pavilion, Margate: Constructional Details.

MR. ERNEST A. BORG, Borough Engineer and Surveyor; MR. G. C. WILKINS, Architectural Assistant.

MARINE BATHING PAVILION, MARGATE

The site of this building is at the westerly end of the Marine Terrace Promenade, opposite the entrance to the Margate West Station. The structure, which is T-shaped on plan, extends for a distance of 214 ft. from the promenade out to sea. The preliminary work consisted in digging 225 pits in the sand and chalk to take the foundations for the steel stanchions. In many cases these pits were 12 ft. below the sand level. The steel stanchions are taken down 5 ft. into solid chalk, and are in all cases surrounded with concrete. About 410 tons of steelwork has been used in this work. The stanchions are tied together at the top with steel girders to form a flat decking or pier, this being one of the main features of the scheme.

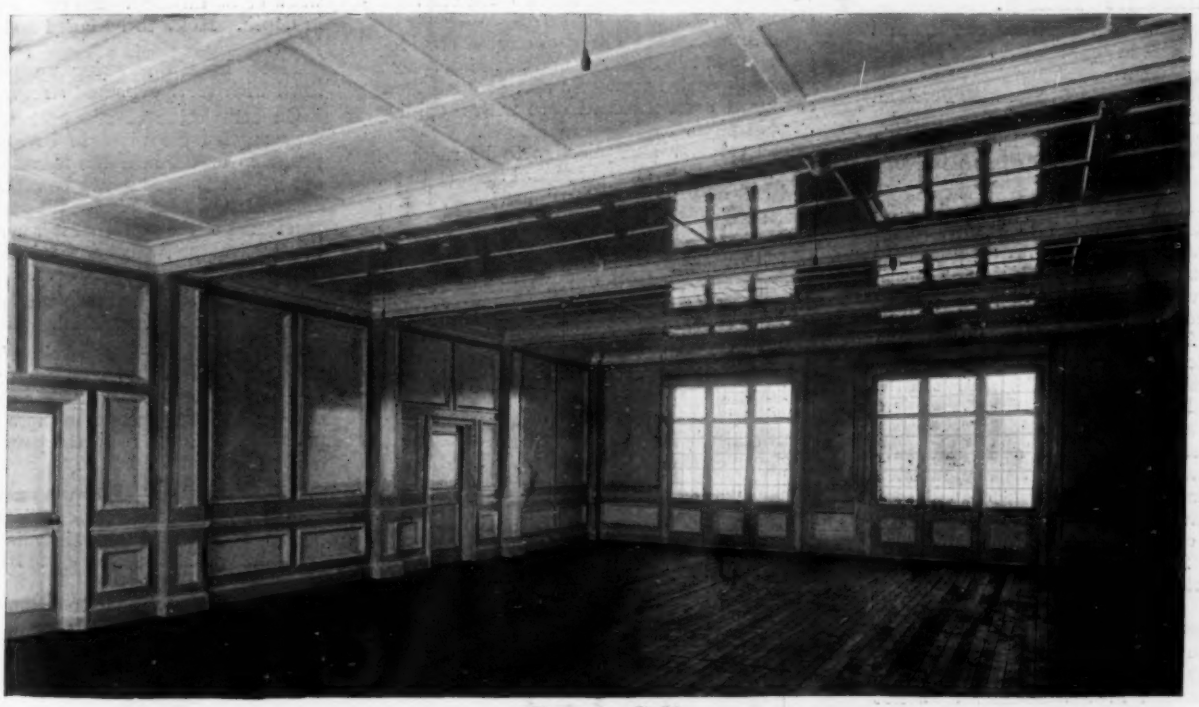
The dimensions of the main decking are 306 ft. long by 88 ft. 6 in. wide, with a space for an orchestra on the north or sea side. The promenade decking approach from the foreshore is 40 ft. wide and 112 ft. long. The main decking and promenade approach is constructed by bridging the steel girders with 9 in. by 2 in. wood joists spaced at 12 in. centres. The joists are then covered with pitch-pine battens 2 in. thick in narrow widths, and the seams caulked similar to a ship's decking, making a shelter during showery weather. This decking also acts as shelter from the sun. There are six sets of solid pitch-pine stairs leading from the promenade decking to the sands, and four sets of similar stairs are constructed under the main building, giving access to the water for bathers. The last-named stairs run in two directions—towards the sea and away from it—to enable non-swimmers to gain the water in comparatively shallow water at high tide.

Upon the main decking is built the bathing pavilion building and necessary administrative rooms, including a café and four kiosks. This building is 265 ft. long by 47 ft. wide, and is surrounded by a promenade 20 ft. wide. The pavilion is constructed of timber on a steel framing, the sides being externally covered with 1¼ in. rusticated boarding between wood pilasters to encase the main steel stanchions that are carried up from the foundations. The flat roof over the main building is constructed of timber joists, laid on the steel framework, covered with zinc roof boarding. The roof over the café has a span of 30 ft. and is formed with six Belfast trusses covered with roof boarding and zinc. The café, the central feature, divides the building as a whole into two sections, each section having equal accommodation for bathers of both sexes. The sections are divided into three saloons, with dressing-rooms for bathers ranged on either side. The total accommodation for bathers is 320

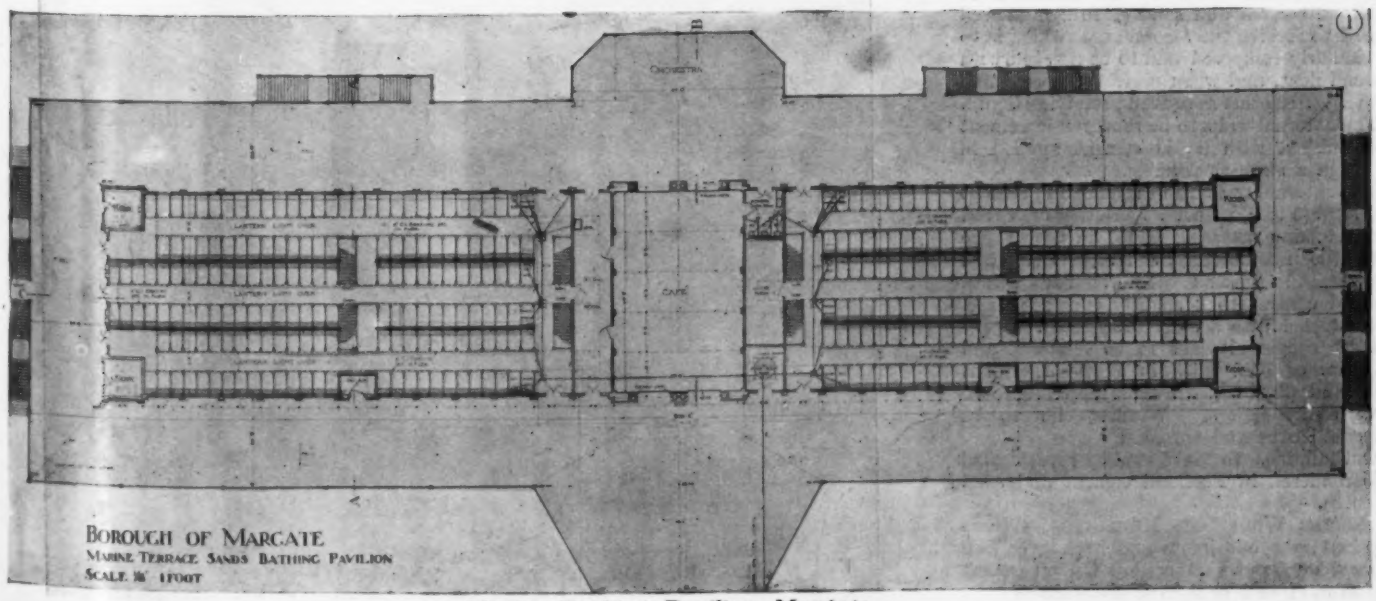
Each saloon has a shower bath, lavatory, and a hot-water foot bath. The dressing-rooms are each 3 ft. wide by 5 ft. long and fitted with seat, duck board, and hat and coat hooks. The saloons are lighted and ventilated by skylights that run down the centre of each.

The café, which is 46 ft. long by 30 ft. wide, has panelled walls and ceiling in timber. Entrance to the café can be made from the sea side as well as from the land side through large glazed folding doors. On the west side of the café is the still room, and on the east side is a ladies' cloak room. The kiosks, which have been constructed on each corner of the building, are 9 ft. 4 in. square, and are used for confectionery, photography, and in one case as an information bureau and parcels office.

The whole work has been designed in the office of the Borough Engineer, Mr. Ernest A. Borg, under his personal supervision, Mr. G. C. Wilkins being his architectural assistant, who was specially deputed to carry out the designs and drawings. The contract price for the work was £28,480. Mr. W. Wild acted as clerk of works.



View in Café.



Marine Bathing Pavilion, Margate.

MR. ERNEST A. BORG, Borough Engineer and Surveyor: MR. G. C. WILKINS, Architectural Assistant.

SPECIFICATIONS.—XXX

By H. V. MILNES EMERSON, A.R.I.B.A.

PLASTERER (*Continued*).

Item.

373. External Stucco in Cement.—Rake out joints and hack surface of brickwork as required for key, and render and set in cement stucco trowelled smooth or felt floated face.

The soffit to eaves to be lathed with double laths and plaster, and set as for walls. Form panels in soffit as shown, with mouldings . . . in girth against wall and eaves board, and cast-plaster brackets fixed at . . . in. centres.

The half-timber work to be rendered on walls and on studding, to be lathed, plastered and set with similar cement stucco.

The flush timber studding and brick surfaces or wide timber studding to be battened over the surfaces and reveals with 1 in. by 1 in. battens every 12 in. centres (or more), lathed with double laths, plastered, and set in similar cement stucco.

The half-timber work, &c., to be rendered on walls, and on studding lathed and plastered, and finished in rough-cast, cement stucco, and flush timber and brick surfaces, &c., to be battened, double lathed, plastered and set in rough-cast cement stucco as before specified.

Alternative Finishings.

Ding the walls with Portland cement and ground chalk lime in equal parts, sand 2 parts, and pea grit 1 part.

Render the walls and set same with Portland cement 1 part, sand 1 part, and lime putty 2 parts, and quickly dash on to last coat whilst wet small white spur chips to the architect's approval.

Note.—White Portland cement can be used in place of ordinary Portland cement.

Render walls and finish with a rough coat and rough-cast with fine pea grit.

Render walls and finish with a smooth or rough coat composed of 1 part white Portland cement and 2 parts of sand, with just enough lime putty to make the mortar work easily.

Render the walls with Portland cement 1 part, sand 6 parts, mixed dry, and just before using add 1 to 2 parts of lime putty and enough water to work same, and thoroughly scratch surface. When properly dry, moisten same and finish white Portland cement coat before specified, or finish with coat composed of Portland cement 1 part, sand 4 parts, lime putty 1 to 2 parts, and add . . . or other approved colouring material to the required tint.

Note.—Permanent colouring material can be mixed with internal and external plastering. Practically any required tint can be obtained, and plaster treated in this manner does not require colour distempering.

The external walls to be rendered in Portland cement and sand (1 to 2) and well scored to receive the second coat, which is to be similarly composed and to be finished with a wood float, and when perfectly dry treated with . . . or other approved petrefying liquid.

The external walls to be rendered in cement and finished with liquid cement applied in as rough a state as possible.

The external walls to be rendered in cement and sand (5 to 2) with . . . or other approved waterproofing material, added in accordance with the manufacturer's instructions, well scored and finished with similar water proofed cement to a slightly rough surface and stippled with a stiff bass broom.

Plain cemented walls to be rendered and set ¾ in. or 1 in. thick in Portland cement and sand (2 to 5). Reveals and angles to have sharp arrises. Window cills to be cemented over and throated.

Outbuildings to have walls, reveals and cills rendered in Portland cement and sand (1 to 3).

374. Ashlar Work and Mouldings.—Where required rake out joints and hack over face to form key, render and set in Portland cement and sand (1 to 3 or 2 to 5) the walls of . . . from . . . in below ground to roof or coping, parapets, and down to roof gutters. To be finished with a trowelled face (or felt floated face), and to be lined out in Ashlar courses as shown.

Dub out to . . . 1 in. extra thickness and form blocks with channelled rustic grooves ¾ in. deep, 1½ in. wide (or as detail), with similar reveals and voussoirs to arches.

Dub out the angle of buildings with plain tiles and cement, and form rustic quoins standing out . . . in beyond rustic blocks and . . . in beyond ashlar blocks.

Dub out in plain tiles to the required thickness for plinth and form moulding . . . in girth in cement and sand (1 to 1).

Form weathered, throated, and moulded string course . . . in girth, moulded pecking . . . in girth, weathered, moulded, throated, and sunk cornice . . . in girth, and weathered and twice throated coping, with (or without) moulding on front edge . . . in girth.

Form moulded architraves . . . in girth to . . . floor windows with plain reveals and throated, weathered and moulded cills . . . . in girth in Portland cement and sand (1 to 1). Block out for main cornice with rough splayed York stone . . . feet wide with brick core filling. Form brick cores for string courses, &c.

Form balustrade with cast cement moulded balusters . . . in diameter and . . . high spaced centre to centre with dies and half balusters as shown upon moulded base with moulding . . . in girth.

The columns and pilasters to be rendered and set in Portland cement and sand (1 to 2), and carefully form all mouldings, cap, bases, enrichments and flutings.

Or the external dressings can be specified as follows:—

The whole of the external Portland cement dressings to be executed in the best manner all to detail drawings, arrises and mouldings true and sharp, with all requisite dubbing out, and all proper moulds and models for enrichments as directed. To be properly protected during progress of works and left clean and perfect at completion.

375. Cement Cills.—Form cills in Portland cement and sand (1 to 1) . . . in thick with a trowelled face, weathered and throated, or brick core.

The concrete steps to doorways to be finished in Portland cement and sand (1 to 1) with a trowelled face.

GAS FITTER.

Item

376. Materials.—The whole of the pipes are to be wrot iron welded barrel gas quality, of approved make, of even bore throughout, and free from all defects.

All threads must be full and in accordance with the British Standard. All pipes are to have screwed socketed joints, with a sufficient number of connectors to allow of sections being readily disconnected as may be desired.

Where pipes are cut to length, the ends are to be well reamered to restore the bore of pipe.

Provide all tees, bends, angles, crosses, nipples, unions, elbows, reducing sockets, caps, plugs, &c. The tubing encased in the plaster to be fixed to walls with wall hooks, and to woodwork with iron bands. Exposed tubing to be secured to face of wall with approved clips.

All tubing to be laid to falls and a sufficient number of caps or plugs to be provided in order to drain the pipes of any water that may accumulate.

Tubing where not exposed to view to have a coat of bituminous paint, and exposed pipes to be painted as described in "Painter."

No floor or other joists to be cut or bored for pipes except immediately against the walls or as directed. No cut to exceed ⅓ in. in depth. Holes to be bored in the centre of joists.

Floor boards covering up tubing to be fixed with brass cups and screws.

On completion of the work the architect may require the pipes to be cut in several places to ascertain if the reamering has been done. If this is found to be satisfactory, the contractor will be paid for the cutting and replacement of the pipes. If it is unsatisfactory, the contractor will be required to restore the pipes at his own expense.

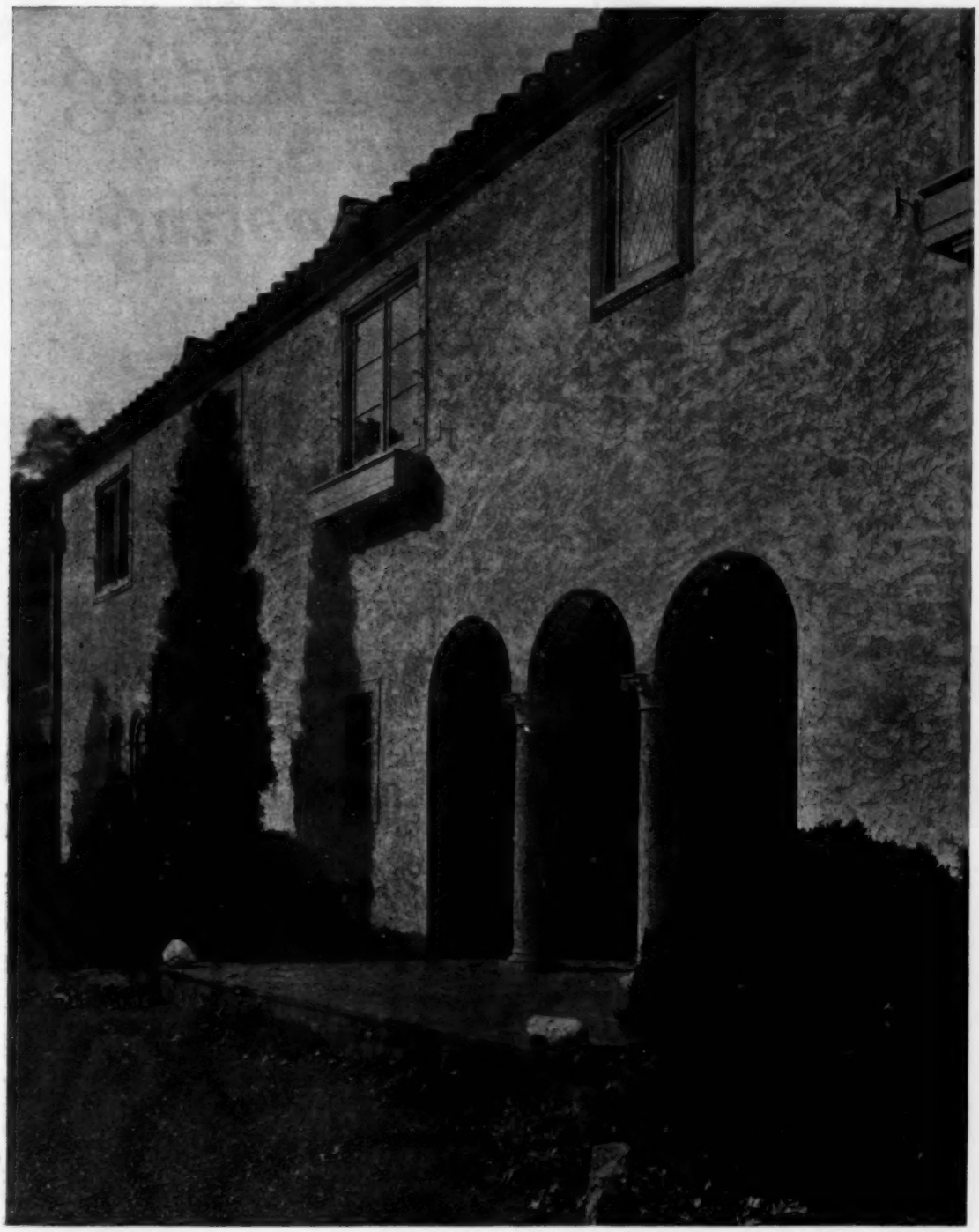
The joints shall be made with manganesite or other approved material.

377. Testing, &c.—The whole of the work when finished shall be tested for soundness by charging the pipes with air at a pressure of 8 in. water gauge. The pipes will not be passed as sound, unless the gauge stands at 8 in. for twenty minutes.

378. Workmanship.—The workmanship shall be of the best possible description and all pipes shall be fixed in straight lines and shall be staired with hooks or clips, securely fixed at proper intervals.

The pipes required to supply a given

Marine Bathing Pavilion, Margate: Cubicles.



External walls finished like those of the house illustrated above demonstrate the great advantages of white Portland cement mortar as a medium of architectural expression. "Atlas White" allows the colour content to be subservient to the will of the architect. *It has the full tensile strength and lasting properties of true Portland cement.* The inherent nature of the mortar and its great asset of plasticity allow a myriad forms and variations of textural finish and open new avenues to beauty of design. I issue a quartette of embossed sheets to give those interested a grasp of the fundamental ideas behind the method of production of four representative and simple surfaces in "Atlas White" mortar. Architects planning a country home of distinction may have a set for the asking.

Regent House,
Regent Street,
London, W. 1.

Frederic Toleman

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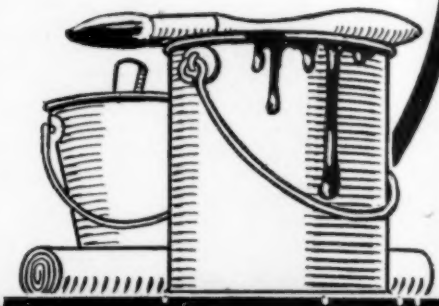

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41 EAGLE STREET, HOLBORN, LONDON, WCI.

'CONFORMS'

Will be engaging the earnest attention of Builders and Contractors who wish to lower the cost of centering which has always been an expensive branch of construction.

A moment's consideration of this illustration of our Patent Adjustable Stanchion Plate which centers a column or pilaster to any dimension in a few seconds will inevitably create a desire to know more about 'CONFORMS.'

For further particulars apply to:—
SCAFFOLDING (GREAT BRITAIN) LIMITED
LANSDOWNE ROAD, LONDON, S.W.8

Patent Adjustable Stanchion Plate.

number of gas points are as follows :—

Tubing.

½ in. bore	.....	up to 3	points.
⅝ „	.....	„ 6	„
¾ „	.....	„ 12	„
⅞ „	.....	„ 16	„
1 „	.....	„ 25	„
1¼ „	.....	„ 50	„
1½ „	.....	„ 70	„
1¾ „	.....	„ 120	„
2 „	.....	„ 140	„
	.....	„ 200	„

The following specification is suitable for housing schemes :—

379. GAS SERVICES.—Each house will require the following points, positions of which are shown on the drawings or will be indicated on the site :—

Lighting Points.

Hall	1	pendant point.
Parlour	1	„
Living Room	1	„
Bedroom, 1st	1	„
„ 2nd	1	„
„ 3rd	1	bracket point.
Bathroom	1	„
W.C.	1	„
Landing	1	„
Scullery	1	„

Heating Points.

Gas Cooker.....	1	point.
„ Copper	1	„

The contractor will commence this work in each case from and including the outlet connection on the meter, The meter will be hired from the gas company, but is to be fixed on a suitable shelf or brackets by the contractor.

380. SIZES OF PIPES.—The rising pipe from the meter shall be of ¾ in. iron barrel. A syphon to be fitted about 18 in. long to connect rising main and meter. This syphon to be of ¾ in. compo. pipe, connected to iron barrel with a ¾ in. barrel union. Linings of unions to be blown inside compo. The connection must be made in such a way as to avoid any possibility of condensation from the house pipes drawing into the meter. The ¾ in. iron pipe from the meter shall be run direct to position for cooking stove and gas copper, and ½ in. iron pipe shall be run to clear the whole of the branches of pendants and brackets.

Pendant joints shall be finished with a tee, and, if the supply is not to be continued to another point, a short piece of barrel shall be inserted in the unrequired end of the tee to extend across the next joist, as a support to the pendant that is to be suspended from it. The ends of these short pieces of barrel shall be capped or plugged. All horizontal pipes under floors shall be not less than ½ in. iron barrel, and all vertical pipes to brackets shall not be less than ½ in. iron barrel.

Bracket positions shall be 6 ft. to 6 ft. 3 in. from the floor level. Tees and plugs shall be left at the bottom of all upright pipes. All exposed pipes shall be painted as specified in "Painter," and unexposed pipes shall be painted one coat of bituminous paint after testing.

The Montague House Site.

Lieut.-Commander Kenworthy has asked the Under-Secretary of State for the Home Department, as representing the First Commissioner of Works, whether it was proposed to build a new block of Government offices on the south side of Whitehall between Montague House and Richmond-terrace; whether the plans, &c., had been approved; for what purpose those new offices were required; when it was proposed to commence work upon them; and whether the sanction of Parliament would be sought before the work was begun.

Captain Hacking said that the answer to the first part of the question was in the negative. The other parts of the question did not therefore arise. No work of such a magnitude as that suggested would be commenced without the House having an opportunity of discussing it.

ROYAL INSTITUTE OF BRITISH ARCHITECTS

The Final and Special Examinations.

THE Final and Special Examinations, qualifying for candidature as Associate R.I.B.A., were held in London from July 7 to 15. Of the 77 candidates examined (six Part I only, three Part II only), 51 passed (four Part I only, two Part II only), and the remaining 26 were relegated. The successful candidates were as follows. (*= Special; †= Special, Part I only; ‡= Part I only; and §= Part II only) :—

*Apps, L. M.	*Wallnutt, C. N.
Arthur, J. A.	White, L. W. T.
Bourne, J. H.	Wilson, E. D.
§Cachemaille-Day, N.F.	*Barrett, W. C.
Carter, P. G. J.	Barrington-Baker, J.
*Edwards, Kindrick	Bent, Frank
‡Englefield, I. U.	Carter, P. J.
Felgate, E. G.	Chester, H. W.
‡Fitton, R. A.	Cosh, J. A.
*Foubister, P. J. M. J.	Goldsmith, E. F.
Green, F. S. M.	Lloyd, W. A. S.
Horner, H. B. L.	MacDonald, A. G.
†Johnson, V. L.	*Parker, Robert
MacManus, F. E. B.	Punchard, S. C.
§Nash, E. T. E.	Richard, J. C.
Nash, V. L.	Roberts, A. G.
Oldacre, W. B.	*Roberts, T. I.
Price, A. J.	Salt, G. W.
*Pringle, Gordon	*Scott, C. J.
†Remnant, E. A.	*Seely, H. J. A.
Roberts, D. H. P.	Sidnell, W. E.
Saunders, D. C.	*Sloot, L. L. T.
Smith, H. H.	Theobald, R. C.
Sutcliffe, B. L.	Trent, W. S.
Tyler, E. B.	*Wright, Hubert.
Thrasher, W. J.	

Examination in Professional Practice for Students of Schools of Architecture recognised for exemption from the R.I.B.A. Final Examination.

This examination was held in London on July 13. Of the 37 candidates examined, 33 passed. The successful candidates are as follows :—

Booth, R. G.	Morrison, James
Brown, F. B. R.	Robertson, A. V.
Peters, H. A.	Beaty-Pownall, D. H.
Halim, M. A.	Buckland, F. J.
Monroe, Leonard	Dunphy, Norah
Oakley, W. O.	Erith, R. C.
Smith, F. H.	Fisher, B. S. H.
Watson, John	Fisher, W. R. F.
Grey, John	Lloyd, S. H.
Ritchie, J. W.	Rugg, Eric
Bryce, W. T. P.	Snailum, T. W.
Alexander, R. R.	Soper, D. E.
Bruce, W. G. H. B.	Tha Tun, M.
Calder, H. K.	Warburton, G. E.
Davidson, J. H.	Ley, A. H.
Durnin, Leo.	Wallis, D. T.
Inglis, F. A. G.	

INTERMEDIATE EXAMINATION. June, 1926.

The Intermediate Examination, qualifying for election as Student R.I.B.A., was held in London from June 11 to 17, and in Manchester from June 11 to 16. Of the 94 candidates examined, 56 passed and 38 were relegated. The successful candidates were as follows, the names being given in order of merit as placed by the examiners :—

Sunter, J. E.	Young, R. A.
Claydon, Bernard.	Sartain, S. P.
Hawtin, M. E.	Fowles, A. J.
Culpin, C. E.	Phillips, B. A.
Parker, C. J.	Williams, Siriol.
Steevens, A. E.	Manning, B. D.
Carr, Terrence.	Steele, F. B.
Jackson, C. C.	Ingoldsby, Joseph.
Mant, C. G.	Rothwell, R. H.
Goddard, A. N.	Kendrick, A. W. R.
Townsend, H. A.	Barker, Kenneth.
Durrell, Harry.	Lamb, Wm.
Worthington, P. V.	Longland, A. T.
Sharpe, A. L.	MacDonald, E. A. H.
Eley, T. H.	MacKenzie, Allan.
Hewitt, A.	Marsh, J. S.
Mellor, Frank.	Wheatley, F. G.
Marshall, H. B.	Ablett, H. K.
Smith, J. J.	Bidwell, G. B. H.
Brown, S. T.	Brenchley, A. R.
Chapman, E. W.	Jones, J. H.
Cowley, R. H.	Kershaw, Sidney.
Duncan, D. R.	Pearce, F. N.
Ferriby, B. A.	Pyman, Noel.
Foley, H. V.	Reynolds, J. J.
Harrison, R. K.	Shelley, W. H.
Mayson, E. W.	Tamkin, A. L.
Hurden, S. A.	Wolff, W. E.

The Special Examination in Design for former Members and Candidates of the Society of Architects, to qualify for the Associateship, was held in London from July 7 to 15, 1926. Of the nine candidates examined, eight passed. The successful candidates are as follows :—

Avery, H. G.	Firth, J. E.
Cavanagh, E.	Forbes, R. G.
Darby, W. R. N.	Stuttle, B.W.
Evershed, S. T.	Wade, L. E.

THE WEEK IN PARLIAMENT

WESTMINSTER, *Wednesday.*

Lead Paint Poisoning.

DURING the report stage of the Lead Paint (Protection Against Poisoning) Bill, Mr. Rhys Davies, on behalf of the Labour Party, moved a new clause to prohibit the use of lead paint in the painting of the interior of buildings. He said that the new clause would ratify the Geneva Convention. Regulations would not prevent lead poisoning; there was no way of dealing with the question except by the total prohibition of the use of white lead in paint.

Captain Hacking, Under-Secretary to the Home Office, said that the Government desired to proceed by way of regulation rather than by prohibition. But the regulations were an experiment, and, if they failed, the only alternative was prohibition, and the Government would not hesitate to bring in prohibition.

The new clause was negatived by 198 votes to 74, and the Bill was read the third time.

Government and the Subsidy.

Mr. Chamberlain informed Sir J. Nall that it was the general policy of the Government to bring to an end the subsidies under the Housing Acts of 1923 and 1924 as soon as practicable, but it was recognised that this could only be done gradually and with sufficient notice to enable local authorities and those engaged in the building industry to accommodate themselves to the position, in order to avoid breaking the continuity of house production. The statutory review under the Act of 1924 fell to be made after October 1 next and he could not at the present time say what reduction of subsidies, if any, might be made by Order under that Act. Any such Order, however, must be confirmed by resolution of the House before becoming operative. Meantime he had decided that houses completed by October 1, 1927, would be eligible for the present rate of subsidy.

Sir John Gilmour, Secretary for Scotland, informed Mr. Macintyre that the general policy of the Government with regard to Scotland was similar to that announced in the case of England. The Government had, however, decided that, in view of the present exceptional position in Scotland, all houses completed before October 1, 1928, would rank for the existing subsidy.

Mr. Chamberlain informed Mr. March that the amount of grants payable to private builders under the Acts of 1923 and 1924 was determined by the local authorities. The subsidy paid from the Exchequer in respect of houses erected by private builders amounted to £10,715 in 1924 and £172,955 in 1925 (no subsidy being payable in 1923), and the number of subsidised houses built by private builders was 1,508 in 1923, 35,455 in 1924 and 62,137 in 1925. Grants amounting to £9,060 in all were made from the Exchequer during 1923 in respect of 38 further houses built under the housing (Additional Powers) Act, 1919. The amount of Exchequer subsidy paid in respect of houses erected by local authorities during the years concerned and previous years under the Acts of 1919, 1923 and 1924 amounted to £7,910,146 in 1923, £7,597,428 in 1924, and £7,360,444 in 1925. The number of houses erected by the authorities were 17,545 in 1923, 17,269 in 1924 and 37,360 in 1925.

BOOK REVIEWS

Building Construction. Part II. Advanced Course. by CHAS. F. MITCHELL. Tenth edition, revised and enlarged. (London: B. T. Batsford.) 1925.

There is very little need to comment upon a book so well known as this one, for the issue of a tenth edition is proof that a real want was well met by the author when he planned and completed this work. It is a work designed to meet the needs of students preparing for the various professional examinations and at the same time to be a book of reference for all those engaged in professional work. To attain this end the author has not hesitated to obtain the assistance of specialists in this revision, and thus secure reliable and up-to-date subject matter. Including the index, the volume consists of some 1,000 pages of useful data on the many subjects that enter into the work of the building and allied profession.

Builders' Estimates and Pricing Data; Their Preparation and Analysis. By HENRY A. MACKMIN, F.S.I., &c. (London: Chapman & Hall, Ltd.) Price 9s. 6d. net.

This volume keeps up the high standard set by previous publications of Messrs. Chapman & Hall in their "Directly-Useful Technical Series." The information contained herein is eminently practical and should prove very useful to young surveyors—and even to those of more mature years, since in the building trade generally no man can ever say that he has nothing more to learn. The author states in the preface that his object has been "not to give lists of prices but to show . . . how to prepare prices and what to avoid." This object has been attained.

The Preservation of Rural England. By PATRICK ABERCROMBIE. (The University Press of Liverpool, Ltd.; London: Hodder & Stoughton, Ltd.) Price 1s. net.

We welcome this publication, which must appeal to everyone who loves the countryside. It is perhaps indirectly to our credit that most of us do not destroy beauty deliberately; it is our failing that we forget that beauty requires nourishing. We have reached a stage in our civilisation when we must begin to think not only about the preservation of the countryside, but think ahead on clearly-defined lines. It is now made clear to us that rural planning is, in fact, an exact counterpart of town planning. This clearly-written book deserves a wide circulation, and the low price at which it is published should bring it within the reach of everyone.

ARCHITECTS' & BUILDERS' INQUIRY BUREAU

We are glad to give questions and answers, but cannot accept responsibility for contributed replies, especially on legal matters.

May we appeal to our correspondents to submit their queries on paper of a size easily filed, and written as legibly as possible, or, better still, in typewriting?—ED.

French Slates.

SIR,—I have been told that black slates from France are of inferior quality for roofing purposes, though I do not know if this is correct. Could any of your correspondents who have had experience of this class of goods tell me if these slates would make efficient damp-proof courses?

ECONOMY.

Bill of Quantities: Errors in Extension.

SIR,—The bill of quantities which I priced for a job has been found to contain numerous errors in extension; some in my favour, but mostly seriously against me. The job is nearly finished and I am about to prepare my final account. The job was in three sections, each priced in a separate bill of quantities, but comprising a single contract. The basis price for similar work is the same in all three bills, so that the amount I really required to carry out an individual item is apparent. I shall be grateful for the following information:—

1. Can I legitimately claim to be paid the price I really required and which, but for the wrong extension, I should have got?

2. Is there a way laid down for adjusting errors of this type, *i.e.*, a standard method agreed between responsible bodies of surveyors and builders?

I am quite willing that the faulty extensions in my favour shall be adjusted, too.

ANXIOUS.

Paint and Varnish Research.

At the Building Research Station at Watford it has been decided to investigate, under the direction of Dr. Stradling, a number of problems connected with the composition of paint and varnish, including the storage and keeping qualities of paints, enamels, and varnishes; changes during drying and weathering; and especially the development of finishes, both for industrial and domestic purposes, which will dry quickly and yet will last.

THE "BUILDER" CONSTRUCTIONAL PROBLEM COMPETITION

THIS competition is limited to students in architecture and building classes or schools, assistants who have not passed the Final of the R.I.B.A., and otherwise engaged in architecture or building, not over 25 years of age. A prize of £1 will be awarded for a satisfactory solution to Problem No. 30. Drawings to be on paper, tracing paper or linen not exceeding 30 in. by 22 in. (Imperial size), and should be in ink, with bold lines and printing, as the drawings, if reproduced, are much reduced in size. Drawings can be sent in a large envelope or rolled. Competitors must put their name and address on each drawing. Those who wish to have their drawings, &c., returned must enclose a stamped and addressed adhesive label.

Answers, addressed to the Editor and marked "Problem 30," to be sent in not later than first post, August 23. The Editor's decision to be final.

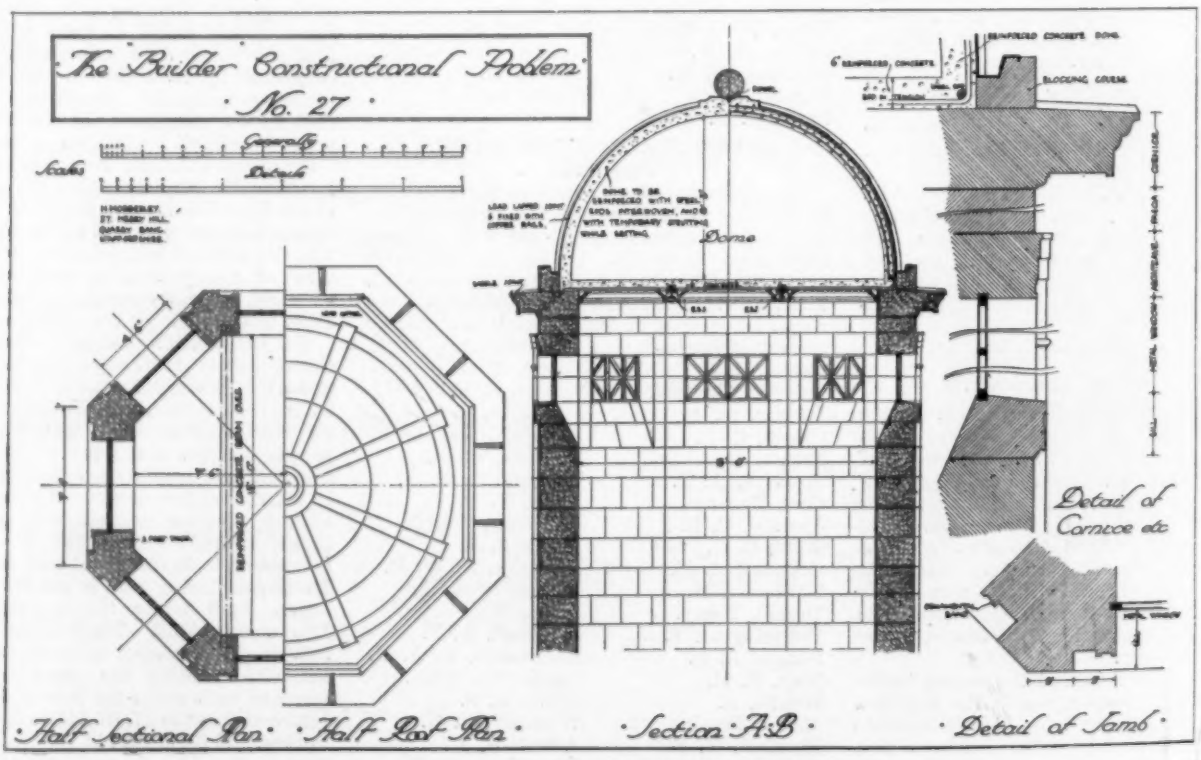
AWARD FOR PROBLEM No. 27.

The prize of £1 has this week been awarded to Mr. H. Mobberley, of Quarry Bank, Staffordshire, whose drawing is reproduced.

PROBLEM No. 30.

The central portion of a block of cottages, projecting about 5 ft., has two rooms, each 10 ft. wide, separated by a passage 4 ft. wide. In the centre of this projection is an open recessed porch 3 ft. deep, with glazed entrance door leading to passage. On either side of the porch lighting the above rooms is a sash window five panes wide, the two side panes fixed and the central sashes, three panes wide, double-hung on the ground floor, and double-hung sashes three panes wide on the first floor. The external walls to be hollow brick, and roof to be slated and hipped and to have 12 in. projecting eaves. Rooms on both floors to be 8 ft. 6 in. high from floor to ceiling.

Draw to scale of ¼ in. to the foot ground floor plan, front elevation, and section through centre of front wall from foundation to roof. Draw to larger scale details of ground-floor window in plan and section, and section through eaves, showing slating, eaves gutters, &c.



Winning Design, Problem 27. By MR. H. MOBBERLEY.

THE BUILDING TRADE

THE MAKING-UP OF NEW AND PRIVATE STREETS.—II

In our last article we confined our observations to the question involved in the Public Health Acts and the Private Street Works Act as to what is a highway repairable by the inhabitants at large, and before considering the operative clauses in the Acts we may point out that although section 150 of the Public Health Act, 1875, and section 6 of the Private Street Works Act confer the powers of making up streets on the urban authorities, application can be made to the Ministry of Health to make an order applying the provisions of the Acts to rural districts.

Application of the Acts to Rural Authorities.

Section 276 of the Public Health Act, 1875, enacts that on the application "of the authority of any rural district, or of persons rated to the relief of the poor the assessment of whose hereditaments amounts at the least to one-tenth of the net rateable value of such district, or of any contributory place therein," the Local Government Board (now the Ministry of Health, see Ministry of Health Act, 1919) may by order declare any provisions of the Act in force in urban districts to be in force in such rural district or contributory place. Where the order is made on the application of one-tenth of the persons rated to the relief of the poor in a contributory place, the order is to be confined to the limits of the contributory place. Section 4 of the Private Street Works Act, 1892, provides that the Local Government Board may declare that the provisions contained in that Act shall be in force in any rural district or any part thereof and may invest a rural sanitary authority with the same powers that an urban authority may acquire by adoption "in like manner and subject to the same provisions as they are enabled to invest rural sanitary authorities with the powers of urban authorities under section 276 of the Public Health Act, 1875."

The Operative Sections.

We now propose considering the provisions of section 150 of the Public Health Act, 1875, and comparing them with the provisions of the code substituted by the Private Street Works Act, 1892, where the latter Act is adopted. The section is a very long one, and it may be convenient to deal with it in portions, first setting out the general powers it confers, and later treating of the procedure prescribed.

Adding Portions to Existing Roads.

The section commences: "Where any street within any urban district (not being a highway repairable by the inhabitants at large) or the carriageway or footway or any other part of such street is not sewered, levelled, paved, metalled, channelled, and made good, or is not lighted to the satisfaction of the urban authority, such authority may by notice addressed to the respective owners or occupiers of the premises fronting, adjoining, or abutting on such parts thereof as may require to be sewered, levelled, etc., or to be lighted, require them" to carry out the works within a time to be specified in the notice.

The final paragraph of the section provides: "The same proceedings may be taken and the same powers may be exercised in respect of any street or road of which a part is or may be a public footpath or repairable by the inhabitants at large as fully as if the whole of such street or road was a highway not repairable by the inhabitants at large." Perhaps the effect of these two portions of the section can be illustrated by the following cases. In Property Exchange, Limited *v.* Wandsworth Board of Works (1902 2 K. B. 61; *The Builder*, March 29, 1902) there was a road which had been used as a highway for many years before 1855—in fact, from 1825—and repaired by the Board since 1855. This street had a number of cottages on the south side of it. About the year 1898 this street, which was 16 ft. in width, was widened to 40 ft. by a longitudinal strip of land to the north side which apparently was dedicated by the owners of the land, and houses were built to the north of this added strip. The local authority had paved this added strip, and were seeking to recover the expenses incurred. In the first instance they had made an apportionment of the expenses upon the frontagers on both sides of the street, but proceedings against one of the frontagers on the old portion to the south having failed they had made a fresh apportionment on the frontagers to the north side only. The case arose under the Metropolitan Management Acts, but for the purposes for which we are citing it the Court of Appeal intimated that the same considerations applied under section 150 of the Public Health Act, 1875.

The Divisional Court had held that the added portion was a new street by itself, and therefore the second apportionment was correct. Two contentions were raised by one of the frontagers on this north side. Firstly, it was said that the whole area of the street as widened was a new street, and that the frontagers on both sides would be liable; and secondly, that if that were not the case the new strip had become merged into the old street and the repairs were payable out of the rates. The Court of Appeal following the case Richards *v.* Keswick (57 L. J.; M. C. 48), which was decided under section 150 of the Public Health Act, 1875, held that the added portion was a new street, and the expenses of paving it must be apportioned solely upon the owners or occupiers of houses abutting upon that portion. The facts in Richards *v.* Keswick were indistinguishable from the facts in this case. There was an old highway separated at one side by a hedge from some fields. The owners of the fields, to develop their land, had taken down the hedge and added a strip to the road and dedicated it to the public, and it was held the added strip was a new street, and that the expenses of paving were rightly apportioned solely on the frontagers at that side of the street. Lord Justice Romer in Property Exchange, Limited *v.* Wandsworth Board of Works pointed out that if the contention was correct that the added portion became absorbed into the old street it would mean that the owner of land fronting a road repairable by the inhabitants at large could throw a strip of land unavailable as it stood for building purposes into the road, and so place himself in a position to develop his valuable building land behind the strip whilst throwing all the expenses of paving, etc., upon the rates.

The latter portion of the section set out above was considered in Evans *v.* Newport Urban Sanitary Authority (24 Q. B. D. 264). There an old footpath repairable by the inhabitants at large had been widened by strips of land added on each side, and houses had been erected which abutted upon it, and it was held that the frontagers were chargeable with the expenses of making up the whole street, and not merely such part as had been added to the ancient highway.

Chorley Corporation *v.* Nightingale (1907, 2 K.B. 637; *The Builder*, July 28, 1906) may be compared with this latter decision. There a lane repairable by the inhabitants at large was bounded by two hedges, but on the side remote from the land of the person sought to be charged with the expenses of making up the lane was a ditch between the roadway and the hedge some 8 ft. wide which had not been used for traffic and which had been thrown into the lane, and the Corporation contended that under the concluding paragraph of section 150 of the Public Health Act, 1875, the person to be charged was liable in respect of this addition to the road, but the Court of Appeal held that this ditch was within the space originally dedicated to the public and thus formed part of the highway. This finding made it unnecessary to consider whether as the land sought to be charged abutted on the highway and not on the added portion that also would have rendered the person sought to be charged not liable as in Property Exchange, Limited (*ubi sup*).

It is very difficult to lay down what the law is from the decided cases, but perhaps it may be suggested that a test is afforded by considering the extent and nature of the land added to an existing road or lane repairable by the inhabitants at large. In Property Exchange, Limited *v.* Wandsworth Board of Works (*ubi sup*) Lord Justice Romer said: "There is nothing to prevent the added strip from being treated as being itself a new street, at any rate where the added strip is a substantial part of the whole street." In that case the added portion was greater than the original street. White *v.* Fulham Vestry, 1896, 74 L. T. 425), which was approved in Property Exchange turned on the character of the addition. There to an existing street which had already been made up and the expenses apportioned on the frontagers on the houses which existed at one side of it, had been added a footpath on the other side by the owner of the land. The vestry had apportioned the expenses of paving on the owners on both sides of the street, but the Divisional Court held the apportionment bad upon the ground that the only new street was the footpath, and the owners of property not abutting upon the footpath were not liable to contribute.

A comparison of the above cases with Evans *v.* Newport Urban Sanitary Authority (*ubi sup*) rather suggests that if the identity either of the portion repairable by the inhabitants at large or of the added portion is maintained they will be treated as separate entities, but that where the additions are very small in extent, or consist of detached portions, then they will become absorbed in the street as a whole and not alter its character; but it will be seen it is very difficult to lay down any rule with certainty in the absence of express decisions on any particular point.

A strip of land, however, may be added to a highway under circumstances which will make the added strip part of the highway (Portsmouth Corporation *v.* Hall, 1907, 71 J.P. 564; *The Builder*, November 23, 1907). There, in 1883, some dispute having arisen as to the extent of the right over an ancient highway, the owners of land agreed with the local authority that as soon as any portion of the estate was laid out for building the road, which was 30 ft. wide, should be straightened out and made 40 ft. in width. The by-laws in force only required a width of 36 ft. The Court of Appeal held that the effect of the above agreement was the same as if the added portions had been purchased by the local authority, and an application to apportion the expenses of making up the road in 1906 was dismissed, as the road in its entirety was repairable by the inhabitants at large.

The above agreement was made with the local authority itself; but whilst on the subject of agreements we may refer to the case Moore *v* Todd (*The Builder*, August 8, 1903), which relates to an agreement between two landowners. In the year 1888 a landowner, with a view to developing his property, widened a

private road not taken over, and as this conferred a benefit on the owner of the land at the other side of the road, the latter agreed to contribute a lump sum on condition that he should not be liable to "contribute to the maintenance or repair of the said roadway, sewer and main drain" until the same should be "taken to by the parish or some other local or public authority." In 1901 the local authority, acting under section 150 of the Public Health Act, 1875, made up the road, and the expenses were apportioned as against both landowners. Under the above agreement the landowner who had paid the above lump sum claimed to recover the amount apportioned as against him from the other landowner, but the Court of Appeal held that the agreement only related to the road as originally constructed by the two landowners, and did not embrace the statutory expenditure expended in converting the road into a street. This is a digression from our consideration of the provisions of the Acts themselves, but it illustrates the care that must be taken in framing any agreement which is intended to transfer the liabilities imposed under the Acts.

NEW BUILDINGS IN LONDON.

Dartford.—Randalls (Contractors), Ltd., have been in negotiation with the U.D.C. with regard to the development of a triangular plot of land abutting on Park-road and Brent-lane. The company are prepared to bear the cost of constructing the necessary sewers for taking the drainage of the houses to be erected on the whole of the estate, and desire the Council to widen, metal and pave Park-road co-extensive with the land to be developed, which is estimated to cost £1,470. This, it is recommended, shall be done when the land is developed by the erection of buildings of a type and elevation acceptable to the Council.

Bushey.—A commencement is to be made at once with the new Junior School for 400 boys for the Royal Masonic Institution for Boys upon their site, the Manor House Estate, Bushey, Herts. The architect is Mr. H. C. Smart, F.R.I.B.A., 73A, Queen Victoria-street, E.C., and the work has been placed with Walter Lawrence & Son, Ltd., of 19, Finsbury-square, E.C.

Mayfair.—Messrs. G. H. Carter, Ltd., of Clissold Works, 57-69, Green-lanes, N.16, and Oxford-street, have received the contract for the whole of the conversion of 20, Charles-street into flats, including the rebuilding of the back wing. They are installing central heating and hot and cold water in all bedrooms, and executing decorations, &c. The lift is being installed by Messrs. Smith, Major & Stevens, Ltd., Battersea. Mr. E. G. Cole, F.R.I.B.A., 12, Bedford-row, W.C., is the architect.

Wembley.—Messrs. Gunton & Gunton, FF.R.I.B.A., are preparing plans for the development of the exhibition ground at Wembley, recently bought by Mr. James White. It is reported that the Palaces of Industry and Engineering, permanent buildings quite suitable for transforming into workshops and factories, will probably be sold separately, and the Stadium may also very likely remain. It is stated that the general area is more likely to be divided among a number of purchasers than acquired by one interest.

Southwark.—A block of ten houses in the slums of Southwark is to be demolished, and the Housing Committee of Southwark Borough Council is now considering a scheme of the Church Army Housing, Ltd., for the erection thereon of working-class dwellings. It is understood that the purchasing price of the site is £1,250.

Bexley.—Memorial homes for the aged poor are to be built here.

Fire at Essex Church.

Orsett Church, Essex, has been severely damaged by fire, the roof, which was in process of restoration, being destroyed.

THE ACCUMULATION OF WEALTH

THE Presidential Address delivered by Sir Josiah Stamp to the Economic Section of the British Association on "The Inheritance of Wealth" suggests some very interesting problems, but we are addressing ourselves to a point not dealt with directly in the paper, but incidental to some of the "Provisional Conclusions" drawn by Sir J. Stamp. He says that the principle of inheritance and bequest has played an important part in the accumulation of wealth, but it is now operating over a diminishing field on account of communal saving, by which he means company reserves, repayment of debt out of taxation, and large capital efforts partly financed out of taxation, such as housing. He then says that the sense of "social injustice" is directed against inequality of wealth, but inequality through inheritance is not now the larger part, and he comes to the conclusion that though, through the inequalities due to the system in which inheritance has a part, the average man may have a slightly smaller proportionate share of the aggregate than he would have were there no inheritance system, he has a substantially larger absolute amount because he shares a larger aggregate or better standard of life than he would have had under a system with no such aid to accumulation.

We do not stop to inquire whether as a matter of fact communal expenditure itself is only rendered possible by the existence of inherited wealth, as tending to foster the accumulation of the wealth out of which taxation provides the funds, as we wish to make a point outside the scope of this paper altogether, and therefore not dealt with by Sir J. Stamp. Taking the admission that the inheritance system has indirectly raised the standard of life of each individual by encouraging accumulation of wealth, and referring to the large communal expenditure now made with the same result, we cannot but ask ourselves what bearing this has on wages. Much is now done for the individual which formerly the individual had to do for himself. It is only necessary to refer to free education, housing subsidies, old age pensions, &c., which involve a vast amount of expenditure and increase taxation, but this indirect raising of the standard of living appears lost sight of when questions arise as to rates of wages.

This communal expenditure and the taxation it involves has a direct bearing upon the cost of production and our relative position as regards foreign competitive markets, and it should be taken into account in settling economic wages; but if it is then lost sight of, the question arises whether this method of raising the standard of living is the best, or whether it is not part of a vicious circle which continually forces up the cost of production by increasing taxation, but is taken no account of in fixing the economic wage.

BINDING AGREEMENTS IN INDUSTRY

THE above was the title of a paper read by Sir Lynden Macassey before the British Association on the 6th inst., but, if we may say so with due respect for such an authority, we do not think the paper as reported in the Press offered any practical solution of our present industrial difficulties. Put very briefly, Sir Lynden considered stability in industry the great desideratum, and to attain this he advocated collective agreements, and to procure such agreements he advocated the compulsion of all employers to join the federation of employers representing that industry, and the same compulsion on all workers to join the representative trade unions, and if national or district rates were negotiated by these bodies, representing the majority of employers and employed in the industry, the rates and conditions of employment so agreed should be made obligatory on all employers and workers in the industry. (This latter condition formed part of the Industrial Courts Bill, but was dropped out of the Act of 1919 because the Labour Members objected to any period being fixed during which an award should continue in force.) In the case of trade unions he suggested that these agreements should be submitted before ratification to a secret ballot, and such agreements when made should be enforceable if necessary by law. If stability in industry could thus be secured Sir Lynden then said the "sympathetic strike" should be made illegal.

Sir Joseph Stamp, in his observations on this paper, raised some very pertinent questions as to the remedies to be applied if such agreements were made legally enforceable. If the members of a trade union committed a breach, what was to be the position of trade union officials? Were they to be imprisoned or would the funds of the union be impounded? How was compulsion to be brought upon persons to join federations and trade unions?

If we were legislating for an industrial Garden of Eden the suggestions might be practicable, although even then it appears to us most undesirable to force individuals into federations or unions as the carrying on of industry by large collective bodies has not proved desirable; but as it is they would involve a drastic change in the existing law governing trade unions which would be very difficult.

In the decision of Taff Vale Railway Company *v.* Amalgamated Society of Railway Servants (1901, A.C.426) it was held by the House of Lords that a trade union could be sued for the wrongful action of its agents in conducting a strike, and it was this decision which after some years of agitation led to the passing of the Trade Disputes Act, 1906, which placed the unions outside the law. The restoration of this decision in an even more extended form would be considered an attack on one of the main charters of trade unionism, and would create considerable ill feeling.

That some amendment of the law is called for is hardly disputed, but great care will have to be taken that existing rights which have already been granted, whether rightly or wrongly, shall be disturbed as little as possible, and, as we have said above, suggestions seem more adapted to the conditions of a pristine State than to our complicated legislative system, and even then opinions would be divided on the question whether it is desirable to compel persons to join associations.

WOODWORKING MACHINERY DISPUTE

A DISPUTE regarding machinery used in woodworking came before his Honour Judge Gurdon at Plymouth County Court recently. Plaintiff was Antony James Maddick, of Sutton-road, Cattedown, Plymouth, who sought to recover £15 3s. 9d. from William Percy Goad Hill in respect of machinery supplied for work on the Astor Trust Housing Estate, upon which defendant was one of the contractors. There was a counter-claim of £23, defendant contending that plaintiff gave an implied warranty that the machinery was suitable for the purpose for which it was required, whereas in fact it was not. It was mentioned that all the items of the account between the parties had been agreed except those relating to a gas engine, a saw bench and a mortising machine.

The judge said he did not think defendant relied in any way on the plaintiff's skill and knowledge as to the suitability of the engine and machinery. He therefore gave judgment for the plaintiff on both claim and counter-claim, with costs.

Carlisle Prison Site.

Cumberland County Council has ratified the sale of half the site of Carlisle Prison to the Carlisle Corporation, which will result in an improvement scheme being carried out in the centre of the city, at a cost of £60,000.

TUBULAR SCAFFOLDING

BY F. E. BENNETT, A.R.I.B.A.

THE old method of scaffolding, as everyone knows, is to erect fir poles about 30 ft. long with their ends embedded in the ground or placed into barrels of earth: other fir poles, lashed to the verticals with rope, forming the horizontal members. On the inner side of these horizontals "ledgers" are tied, so forming a frame which stands about 4 ft. from the face of the building. Short timbers then reach from the frame and at the other ends are wedged into holes made in the wall. The displacement of this system is another example of the great changes in methods of production taking place since the commencement of this new metallic era—the era of steel. Because steel scaffolding is still something of a novelty, it may not be out of place to give a rough description of it.

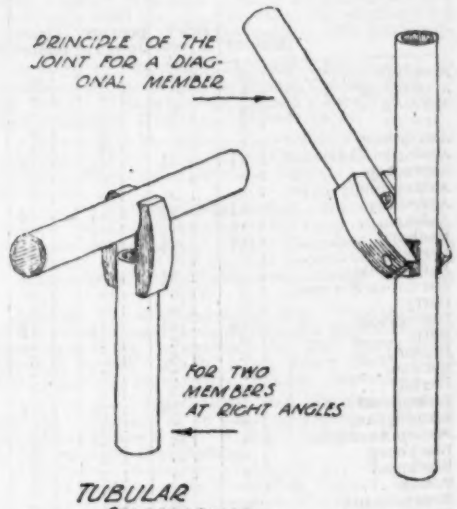
Instead of embedding standards in the ground or in barrels of earth, a start is made with a metal base (adjustable if desired) on which are placed the steel tubes about 12 ft. high (see diagrams). A dowel projects from one end of the tubes and the other ends act as sockets for dowels. Tubes, with their socket ends placed over the holes, are then placed in line parallel with the building at intervals short or long according to the greatness of the loads to be carried. The horizontal members are then attached to the standards by an all-metal device, which seems far more secure than the old one of knotted rope levered tight by a hammer end, although the principle is similar. The two tubes are made to fit snugly together by means of a shaped wedge. A coupling piece encloses the tubes, and the joint is completed by screwing an eye bolt through a plate as tightly as possible on to the tubes. A diagram shows the simple method by which the coupler deals with all situations or angles of joints.

Putlog holes in the wall are avoided by attaching wooden putlogs to steel bars which, pointed at the end, are inserted in the wall jointing. Adjustable bases with screw attachments are used when exact levels are required. The members may be increased in section for heavier stresses. There are none of the ordinary nuts and bolts. The height and extent to which this scaffolding can be fixed appears to have no limit. Owing to the ease with which it can be transported the hiring out of apparatus to long distances is not over costly.

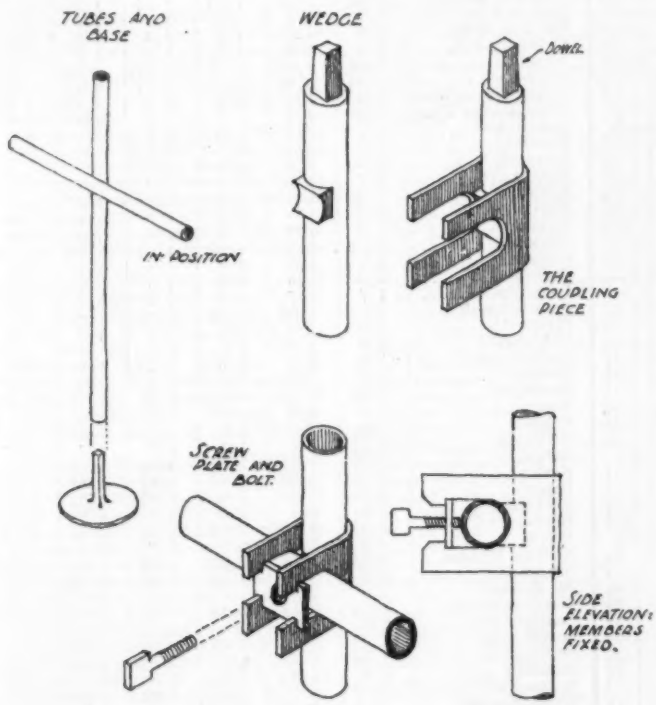
An interesting case of an advantage of steel tubes may be noted. In a certain town hall, where the inside was under repair, the tubes were painted to combine with the decorative scheme of the hall so that meetings could still be carried on with little interference.

Tubular scaffolding comes as the latest development after a transition through other forms of improvement on the poles and rope joints. The new tubular system is accepted as the last thing of its kind and generally credited as a sound development. Again, the fixing may present difficulties, requiring skill which is not available. Among recent jobs going up in London, the new method was seen used with apparent success on Devonshire House. It is claimed for tubular scaffolding that it is fireproof and practically indestructible; that the erecting and dismantling is very rapid and requires little labour; and that it is not affected by climatic conditions. It is undoubtedly very neat and compact when erected and can be stored in a comparatively small space when dismantled.

Suspended scaffolding with winding machines is an outcome of the steel-frame building and a natural accessory to it. With buildings tending to become higher and higher, built-up scaffolding becomes awkward and obstructs movement on the lower floors while the upper ones are being completed. The suspended scaffold answers the problem for steel-frame buildings, for immediately the steelwork is erected or partially erected the built-up scaffolds can be done away with and the suspended scaffolds hung out. Steel "I" beams are cantilevered out some 5 or 6 ft. beyond the face of the building from which the two ropes hang with fixed upper ends. The bottom ends coil on to small hand-winding machines. The winding machines are fixed to a steel framing which, when boarded over, forms the scaffolding platform. The framed units are then joined together to make the required lengths of scaffold and can be made continuous right round a whole building if necessary. As the work proceeds the platforms are easily moved upward by winding the machines.



TUBULAR SCAFFOLDING.



THE METHOD OF FIXING TUBULAR SCAFFOLDING SHOWN IN PRINCIPLE.

LAW REPORT

KING'S BENCH DIVISIONAL COURT.

(The Lord Chief Justice and Justices Avory and Salter.)

A BUILDER AND OFFENCES AGAINST LOCAL BY-LAWS.

ON July 28 the Poole Justices appeared to answer rules *nisi* obtained by Mr. John Flower, a builder of Poole, calling upon them to show cause why a certain conviction recorded against Mr. Flower of an alleged offence against local building by-laws should not be quashed and no further proceedings taken.

Mr. Trapnell, for the magistrates, said that Mr. Flower built a bungalow without depositing plans that would satisfy the by-laws, and, in fact, in defiance of the local Council. Three summonses were taken out against him, for it was alleged that the walls were not of the necessary thickness, the joists were too light, and the roof rafters were absent, so that the roof was not safe. Mr. Flower was fined. Then he was further proceeded against for permitting a building contravening the by-laws to remain. He replied that he had sold it to a Mr. Mead. An adjournment was granted for him to prove that, but he made no effort to do so, and in the end the Justices had no alternative but to register a conviction and fine him, and inflict penalties for continuing the offence. It was agreed that since then Mr. Flower had said he would put the bungalow right if the owner would let him. Counsel said that the Justices had no real evidence of sale and in those circumstances the conviction could not be attached. The question was, whether Mr. Flower at the time of the alleged offence had effective control of the building. If he had, then the conviction was right. He did not dispute that if Mr. Flower had not control of the bungalow he could not be fined for the continuing offence.

In the result their lordships discharged the rules.

The Lord Chief Justice, in giving judgment, said there was no discrepancy in the conviction. It had been argued that Mr. Flower could not be guilty of the offence at the material time as he was not the owner of the building. As a matter of fact, the correspondence showed that he had effective control; and when before the Justices he deliberately refrained from endeavouring to prove his non-ownership of the bungalow. He (the Judge) considered the conviction was right and that the rules should be discharged.

The other members of the Court concurred.

RATES OF WAGES IN THE BUILDING TRADE

Every endeavour is made to ensure accuracy, but we cannot be responsible for errors.

	Masons	Bricklayers.	Carpenters Joiners	Plasterers.	Slaters.	Plumbers.	Painters.	Labourers
Aberdare	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Accrington	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Alfreton	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Alnwick	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Altrincham	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Ashford (Kent)	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/—
Ashington	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Ashton-under-Lyne	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Aylesbury	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Aylsham	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4›	1/0
Banbury	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Barnsley	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Barnstaple	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Barrow-in-Furness	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Barry	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Basingstoke	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Bath	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Bedford	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Berwick	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Bexhill	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/1
Birkenhead	1/10	1/10	1/10	1/11	1/10	1/10	1/9½	1/4½
Birmingham	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Bishop Auckland	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Blackburn	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Blackpool	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Bolton	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Bournemouth	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Bradford	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Bradford-on-Avon	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/3½	1/0½
Braintree	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Brentwood	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Bridgwater	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/1
Bridlington	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Brighton	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Bristol	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Bromsgrove	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Bromyard	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0½
Bungay	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Burnley	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Burton-on-Trent	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Bury	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Buxton	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Cambridge	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Canterbury	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Cardiff	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Carlisle	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Chatham	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Chelmsford	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Cheltenham	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Chester	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Chesterfield	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Cirencester	1/5	1/5	1/5	1/5	1/5	1/5	1/4	1/1
Clacton	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Colchester	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Coventry	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Cranbrook	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Crewe	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Cromer	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Darlington	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Deal	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Denbigh	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/0½
Derby	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Devizes	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/3½	1/0½
Dewsbury	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Doncaster	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Dorchester	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/3½	1/0½
Dorking	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Dovercourt	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/1
Driffield	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Droitwich	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Dudley	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Durham	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Eastbourne	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
E. Glam. (Mon. Val)	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Ely	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Exeter	1/7	1/7	1/7	1/7	1/7	1/7	1/6	1/2½
Exmouth	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/1
Fakenham	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Felixstowe	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Folkestone	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0·
Frome	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Glossop	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Gloucester	1/6	1/6	1/6	1/6	1/6	1/6	1/5	1/2
Godalming	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/1
Goole	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Gosport	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Grantham	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Grays	1/8½	1/8½	1/8½	1/8½	1/8½	1/8½	1/7½	1/3½
Great Yarmouth	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Grimsby	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Guildford	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Halifax	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Harpenden	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Harrogate	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Hartlepools	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Harwich	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/1
Hastings	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Hatfield	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Hednesford	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Hereford	1/6	1/6	1/6	1/6	1/6	1/6	1/5	1/1½
Herne Bay	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Hertford	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Hitchin	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Hoddesdon	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Holt	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Huddersfield	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Hull	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Hunstanton	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Huntingdon	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/1
Isle of Wight	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0½
Ipswich	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Keighley	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Kettering	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Kidderminster	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
King's Lynn	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/1
Lancaster	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Leamington Spa	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Leeds	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Leicester	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Leighton Buzzard	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Lichfield	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Lincoln	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Littlehampton	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/1
Liverpool	1/10	1/10	1/10	1/10	1/10	1/10	1/10	1/4½
Llandudno	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Llanelly	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
London:								
12 m. radius	1/9½	1/9½	1/9½	1/9½	1/9½	1/9½	1/8½	1/4½
12–15 m. radius	1/9	1/9	1/9	1/9	1/9	1/9	1/8	1/4
Loughborough	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Lowestoft	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Luton	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Macclesfield	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Maidstone	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Malvern	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Manchester	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Mansfield	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Margate	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Market Harborough	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Matlock	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Melton Constable	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Melton Mowbray	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Merthyr Tydfil	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Middlesbrough	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Newark	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Newbury	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Newcastle-on-Tyne	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Newcastle-ur-Lyme	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
New Forest	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/1
Newmarket	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/1
Newport, Mon.	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Northampton	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Norwich	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Nottingham	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/1½
Nuneaton	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Oakham	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Oldham	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Oxford	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Paignton	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Peterborough	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Plymouth	1/8	1/8	1/8	1/8	1/8	1/8	1/7	1/3½
Pontypridd	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Portsmouth	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Preston	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Ramsgate	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Reading	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Redcar	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Redditch	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Reigate	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Retford	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Ripon	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Rochdale	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Rochester	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Rugby	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Saffron Walden	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
St. Albans	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
St. Helens	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Sawbridgeworth	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Saxmundham	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0½
Scarborough	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Sevenoaks	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Sheffield	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Shrewsbury	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Sittingbourne	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Southampton	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Southend-on-Sea	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Southport	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
South Shields	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Stevenage	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Stockport	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Stockton-on-Tees	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Stoke-on-Trent	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Stourbridge	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Stourport	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Stowmarket	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Stratford-on-Avon	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Stroud	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5	1/1½
Sunderland	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Swaffham	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Swansea	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Swindon	1/6	1/6	1/6	1/6	1/6	1/6	1/5	1/1½
Tamworth	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Taunton	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Thetford	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Torquay	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1½2½
Totnes	1/5	1/5	1/5	1/5	1/5	1/5	1/4½	1/1
Trowbridge	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/3½	1/0½
Tunbridge Wells	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Uttoxeter	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Wakefield	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Walsall	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Wallsend	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Warminster	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Warrington	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Warwick	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Wells (Norfolk)	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Welwyn Gar. City	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
West Bromwich	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Weston-sup.-Mare	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Weymouth	1/5	1/5	1/5	1/5	1/5	1/5	1/4	1/1
Whitby	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Wigan	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Winchester	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/1
Windsor	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Wisbech	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Wolverhampton	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Woodbridge	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Worcester	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Worksop	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2
Worthing	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/1
Wrexham	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/2½
Wroxham	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Wymondham	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0½
York	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½

(For rates of wages in the Building Trade in Scotland, see page 268.)

CONTRACTS, COMPETITIONS, &c.

For some contracts still open, but not included in this List, see previous issues. Those with an asterisk are advertised in this number. Certain conditions beyond those given in the following information are imposed in some cases, such as that advertisers do not bind themselves to accept the lowest or any tender; that a fair wages clause shall be observed; that no allowance will be made for tenders; and that deposits are returned on receipt of a bona-fide tender unless stated to the contrary.

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in; the name and address at the end is the person from whom a place where quantities, forms of tender, &c., may be obtained.

BUILDING, PAINTING, ELECTRIC LIGHTING, HEATING, etc.

AUGUST 16.—**Aberdeen.**—BUILDING.—For (1) New intermediate school, Torry; and (2) Aberdeen Grammar School, new gymnasium, for the E.C. J. A. O. Allan, F.R.I.B.A., 25, Union-terrace.

AUGUST 16.—**Bolton.**—ELECTRIC LIGHTING.—Electric lighting installation at Boothstown Conservative Club. Steward at club.

AUGUST 16.—**Bootle.**—PAINTING.—Cleaning and painting (1) Exterior, Linacre Hospital, Linacre-lane; (2) exteriors and interiors of eight public conveniences; (3) railings, gates and exteriors of lodge, bungalow, bandstand, seats, &c., Derby Park; (4) exterior of cemetery chapel, Linacre-lane; (5) interior painting, superintendent's house, Balliol-road Baths; and (6) Linacre-lane canal bridge, for the C.B. Borough Engineer.

AUGUST 16.—**Dublin.**—CHAPEL.—Erection of new chapel at Sanatorium, Crooksling, for the Commissioners of Borough of Dublin. City Treasurer, Exchange Buildings, Dublin. Deposit £1.

AUGUST 16.—**Exeter.**—PAINTING.—For painting at 97, Heavitree-road, for the Devon C.C. County Architect, 1, Blackall-road, Exeter.

AUGUST 16.—**Fermoy.**—RECONSTRUCTION.—For the reconstruction of premises at Fermoy, for the Royal Hotel Co. Mr. J. J. Bowen, architect, Fermoy.

AUGUST 16.—**Halifax.**—SUB-STATIONS.—Electricity sub-stations in Powell-street and Stannary-street, for the C.B. Borough Engineer, Crossley-street.

AUGUST 16.—**Hull.**—OFFICE.—Erection of Piermaster's office, for the T.C. City Engineer, Guildhall, Hull.

AUGUST 16.—**Kirkcaldy.**—COTTAGES.—Thirty and twenty-four three-roomed flatted and cottage type houses to be erected on two adjoining sites at Lumphinnans, for the D.C. W. Williamson, F.R.I.B.A. architect, Kirkcaldy. Deposit £1 1s.

AUGUST 16.—**London.**—FLATS.—Erection and completion of 15 working-class flats in Betterton-street, W.C.2, for the Metropolitan Borough Council of Holborn. J. E. Parr, A.M.Inst.C.E., Borough Surveyor, Town Hall, High Holborn, W.C.1. Deposit £2 2s.

AUGUST 16.—**Manchester.**—PAINTING.—For painting work at the Bradford branch library. City Architect, Town Hall, Manchester. Deposit 10s. 6d.

AUGUST 16.—**New Mills.**—ADDITIONS.—To the sewage works, consisting of detritus tanks, &c., circular filters, humus tanks, and other works, for the U.D.C., W. C. Sheard, engineer and surveyor. Deposit £3 3s.

AUGUST 16.—**Pembroke.**—PAINTING.—Painting glazing, pointing walls, repairing chimney stacks, roofs, &c., and pointing round doors, windows and ridge tiles of 158 cottages, the property of the Urban Council; at 16, Clonskeigh-villas, with railed front gardens; 31, Harmony-villas, with railed front gardens, and railings at entrance of playground; and 111, Pembroke-cottages, Donnybrook, with railings, &c., at plantations and bridge, &c., for the U.D.C. J. C. Manly, Clerk, Town Hall, Ballsbridge, co. Dublin.

AUGUST 16.—**Swansea.**—HEATING.—For (*a*) Electrical lighting, &c., installations, and (*b*) heating, hot water, laundry and cooking, &c., installations, at the new Isolation Hospital at Hill House, Sketty, for the C.B. E. E. Morgan, A.R.I.B.A., Borough Architect, 3, Prospect-place. Deposit, £3 3s. each.

AUGUST 17.—**Bideford.**—HOUSES.—Eight non-parlour houses on the Handy Cross site, for the T.C. F. J. Harris, Borough Surveyor and Housing Architect. Deposit £1 1s.

AUGUST 17.—**Clacton.**—COTTAGES.—Erection of five cottages in Warwick-road for the U.D.C. Council Surveyor, Council Offices, Clacton-on-Sea.

AUGUST 17.—**Hailsham.**—HOUSES.—Erection of eight cottages, for the R.D.C. Mr. W. O. Humphery, surveyor, 17, London-road, Hailsham.

AUGUST 17.—**Halifax.**—BUNGALOW.—Bungalow at the junction of Skircoat Green-road and St. Alban's-road. G. R. Oddy, Lic.R.I.B.A., architect and surveyor, Ward's End-chambers.

AUGUST 17.—**Hayfield.**—HOUSES.—Twenty non-parlour houses on the Cote-lane site, for the R.D.C. C. S. Righton, chartered architect, 18, Market-street, Marple. Deposit £2 2s.

✱AUGUST 17.—**Kensington.**—DEMOLITION AND BUILDING.—Demolition of existing buildings and for the erection of 16 flats in Thresher's-place, Notting Hill, for the Royal Borough Council. Horace Rapson, Town Clerk, Town Hall, Kensington, W.8. Deposit £2 2s.

AUGUST 17.—**Maldon.**—DWELLINGS.—Twelve houses in pairs, in Queenborough-road, Southminster; 10 houses in pairs, in Hackman's-road, Cold Norton; and 6 houses in pairs, near Round-bush, Mundon, for the R.D.C. Wm. Almond, Surveyor 6, Market-hill.

AUGUST 17.—**Nottingham.**—PAINTING.—For painting at the following buildings, viz.: (1) Exterior of the Portland Baths, Muskham-street; (2) exterior and interior of the River Trent Baths, Victoria-embankment; (3) exterior of various buildings at the City Mental Hospital, Mapperley-hill. Mr. T. Wallis Gordon, City Engineer, Guildhall, Nottingham. Deposit £1 1s. each.

AUGUST 17.—**Peterborough.**—HOUSES.—Erection of 77 houses, for the T.C. Mr. W. H. A. Court, City Engineer, Broadway, Peterborough. Deposit £3 3s.

AUGUST 17.—**St. Andrews.**—HOUSES.—Erection of 50 houses at St. Mary's-street site. Mr. William Watson, Burgh Surveyor, Town Hall, St. Andrews. Deposit £1 1s.

AUGUST 17.—**Whitchurch.**—PAINTING, &c.—For repairs and painting at Wauntreoda Farm, Whitchurch, for the Glamorgan Agricultural Committee. County Land Agent, No. 5, Pembroke-terrrace, Cardiff.

AUGUST 18.—**Bushey.**—COTTAGES.—Twenty cottages on the Clapgate Farm housing site, for the U.D.C. E. E. Ryder, architect and surveyor. Deposit £2 2s.

AUGUST 18.—**Chiswick.**—FLATS.—Erection of five blocks of flats (32 flats) at Belmont Road, Chiswick, for the U.D.C. Edward Willis, F.S.I., M.Inst. C.E., architect, Town Hall, Chiswick, W.4. Deposit £2 2s.

AUGUST 18.—**Kensington.**—TELEPHONE EXCHANGE.—Erection of at Kensington for the Commissioners of His Majesty's Office of Works. Contracts Branch, King Charles-street, London, S.W.1. Deposit £1 1s. (cheques payable to the Commissioners.)

AUGUST 18.—**Newcastle-upon-Tyne.**—SHOPS AND HOUSES.—Erection of 14 combined shops and houses, at the corner of Stephenson-road and Benton-road, on the High Heaton estate, Newcastle, for the Housing Committee of the Corporation. Housing Architect, 18, Cloth Market, Newcastle. Deposit £3 3s., payable to the City Treasurer.

AUGUST 18.—**Rathdown.**—PAINTING.—Painting of 105 sewer vent shafts, for the Rathdown No. 1 R.D.C. P. H. McCarthy, 26, Lower Leeson-street, Dublin.

AUGUST 18.—**Stornoway.**—EXTENSION.—Alterations and extensions for new operating theatre, X-Ray, light treatment, steam and electric plant installations, &c., at the Lewis Hospital, for the Committee. Geo. Gordon & Co., architects, Inverness.

AUGUST 18.—**Wadsley.**—RESIDENCE.—Detached residence at the West Riding Mental Hospital, Wadsley, near Sheffield, for the C.C. W. E. H. Burton, Architect and Engineer, West Riding Mental Hospitals Board, Office, Wakefield. Deposit £1.

AUGUST 19.—**Belfast.**—PAINTING.—For painting at Peter's Hill, Ormeau-avenue, and Templemore-avenue public baths, for the T.C. City Surveyor's Department, City Hall.

AUGUST 19.—**Glasgow.**—WALL.—Removing and re-erecting stone wall, laying concrete foundations, and granite sett paving, &c., at the gateway of Kelvinhaugh refuse despatch works, Gilbert-street, for the T.C. J. Lindsay, Town Clerk.

AUGUST 19.—**London.**—FLATS.—Erection of a block of 80 flats between Chapel-place and Mantell-street, London, N.1, for the Metropolitan Borough Council of Finsbury. E. C. P. Monson, F.R.I.B.A., F.S.I., &c. Council's Architect, Finsbury Pavement House, 120, Moorgate, London, E.C.2. Deposit £3.

AUGUST 19.—**London.**—EXTENSION.—Extension of Wanstead Telephone Exchange for the Commissioners of His Majesty's Office of Works, Contracts Branch, H.M.O.W., King Charles-street, London, S.W.1. Deposit £1 1s. (cheques payable to the Commissioners).

AUGUST 19.—**Port Ellen.**—ALTERATIONS.—To the Post Office, Port Ellen, Isle of Islay, for H.M.O.W Architect, H.M. Office of Works, 122, George-street, Edinburgh. Deposit £1 1s.

AUGUST 20.—**London.**—TELEPHONE EXCHANGE.—Erection of "Archway" Telephone Exchange for the Commissioners of His Majesty's Office of Works, Contracts Branch, H.M.O.W., King Charles-street, London, S.W.1. Deposit £1 1s; (cheques payable to the Commissioners).

AUGUST 20.—**Manchester.**—CONVERSION.—For the conversion of conservatory into shelter at Heaton Park, for the T.C. City Architect, Town Hall, Manchester. Deposit £1 1s.

AUGUST 20.—**Milton.**—HOMES, &c.—Erection of the Joseph Wilson Memorial Cottage Homes and Wesleyan Chapel, Milton. Mr. Hugh Jackson, Market-place, Brampton, Carlisle.

AUGUST 20.—**Plymouth.**—DEMOLITION.—For the demolition, &c., of the property known as No. 32, New-street, for the T.C. Corporation Housing Department, Sun Buildings, Plymouth.

AUGUST 20.—**Sandwich.**—EXTENSIONS.—For extensions to the pig pens at the Cattle Market, for the T.C. Mr. R. Saunders, Borough Surveyor, Sandwich.

AUGUST 21.—**Shifnal.**—HOUSES.—Erection of four houses, for the R.D.C. Mr. C. H. Hines, surveyor, Market-square, Shifnal. Deposit £1 1s.

AUGUST 21.—**Stornoway.**—RECONSTRUCTION.—Of the Municipal buildings and library, for the T.C. J. G. Chisholm, architect and surveyor, 15, Union-street, Inverness.

✱AUGUST 21.—**Sutton-in-Ashfield.**—HOUSES.—Erection and completion of 120 dwelling-houses, parlour and non-parlour types, to be erected in pairs and blocks of four. Also for the construction of new roads, approaches, and sewers (the scheme is divided into five sections), for the U.D.C. Warner & Bocock, architects and surveyors, Mansfield-road, Sutton-in-Ashfield. Deposit £3 3s.

AUGUST 23.—**Aylesbury.**—HOUSES.—Erection of 62 houses on the California estate, for the T.C. Mr. W. H. Taylor, Borough Engineer, Town Hall, Aylesbury.

AUGUST 23.—**Bromley, Kent.**—SCHOOL.—Erection of a new Council School to accommodate 320 senior girls and 400 mixed juniors on the Bromley portion of the L.C.C. Downham housing estate, for the B.C. F. H. Wood, P.A.S.I., Chartered Quantity Surveyor, Gloucester House, 19, Charing Cross-road, W.C.2., after payment of deposit of £2 2s. to the Clerk to the Bromley E.C.

AUGUST 23.—**Edinburgh.**—PLATFORM, &c.—Construction of a tipping platform in ferro-concrete and steel, together with mass concrete foundation for new destructor unit, and the removal of the existing steel platform, for the T.C. Burgh engineer, City Chambers, Edinburgh.

AUGUST 23.—**Horsham.**—HOUSES.—Erection of 69 houses on the site of Spooner's Farm, Crawley-road, for the U.D.C. C. G. Atkinson, Council's Surveyor, Town Hall Chambers, Horsham. Deposit £3 3s.

AUGUST 23.—**Plymouth.**—PAINTING.—For external painting of certain schools. E. Chandler Cook, Secretary for Education, Education Office, Coburg-street Plymouth.

AUGUST 24.—**Gilfach-Maen-Isaf.**—HOUSES.—Erection of 100 houses, together with roads and sewers, on upper part of site at Gilfach-Maen-Isaf, Trelewis, Glamorgan, for the Taff Merthyr Garden Village, Ltd. T. Alwyn Lloyd, 6, Cathedral-road, Cardiff. Deposit, £3 3s.

AUGUST 24.—**London.**—COTTAGES, &c.—Erection of five cottages and the conversion of a warehouse into eight flats at 59, Grange-walk, for the Bermondsey Borough Council. Fredk. Ryall, Town Clerk, Town Hall, Spa-road, Bermondsey, S.E.16. Deposit £2 2s.

AUGUST 24.—**Thurstonland and Farnley Tyas.**—HOUSES.—Erection of 16 dwelling-houses, in Stocksmoor-lane, for the U.D.C. J. Berry & Sons, architects, 3, Market-place, Huddersfield.

AUGUST 24.—**Wishaw.**—ADDITIONS, &c.—For alterations and additions to the Post Office, Wishaw, Lanarkshire, for H.M. Commissioners of Works. Architect, H.M. Office of Works, 122, George-street, Edinburgh. Deposit £1 1s.

✱AUGUST 25.—**Godalming.**—HOUSES.—For blocks of four, two blocks, four pairs, seven pairs, seven pairs, one pair, for the T.C. G. B. Hartfree, Borough Surveyor and Housing Architect. Deposit £2 2s.

✱AUGUST 25.—**London.**—PAINTING.—Cleaning and painting and repairs at Southwark Casual Ward, Great Guildford-street, S.E., for the Metropolitan Asylums Board. Office of the Board, Victoria-embankment, E.C. 4. Deposit, £1.

AUGUST 25.—**London.**—PAINTING.—Cleaning and painting at St. Pancras Casual Ward, Holmes-road, Kentish Town, N.W., and Brook Ambulance Station, Shooter's-hill, S.E. 18, for the Metropolitan Asylums Board. Office of the Board, Victoria-embankment, E.C. 4. Deposit, £1 1s. each work.

AUGUST 25.—**Various Places.**—BUILDING WORK.—(1) New coalstore, &c., at Eastern Hospital, Homerton-grove, E. 9; (2) new verandah to infirmary block at White Oak, Swanley, Kent; (3) new drying room and scullery at Woolwich Casual Ward, Hull-place, Plumstead, S.E. 18; and (4) alterations and laying new floor to recreation room at the Brook Hospital, Shooter's Hill, S.E. 18, for the Metropolitan Asylums Board. Office of the Board, Victoria-embankment, E.C. 4. Deposit, £1 each.

AUGUST 26.—**Banbridge.**—ALTERATIONS.—For alterations and additions to Banbridge Technical and Secondary School premises, for the Down County Regional Education Committee. Mr. W. W. Larmor, architect, Banbridge.

AUGUST 26.—**Cahir.**—COTTAGES.—Eight cottages at Cahir, co. Tipperary, for the Irish Sailors' and Soldiers' Land Trust. Engineer, 30, Lower Fitzwilliam-street, Dublin. Deposit £2 2s.

AUGUST 26.—**Chatham.**—HOUSES.—Erection of 132 on the Post Barn housing site, for the Town Council. Borough Surveyor's Office, Town Hall, Chatham. Deposit £2 2s.

AUGUST 26.—**Stirling.**—HOUSES.—Eleven houses and four shops, being the first development of St. Mary's Wynd Re-housing Scheme, for the T.C. A. H. Goudie, Burgh Engineer. Deposit £1.

AUGUST 27.—**Carmarthen.**—EXTENSION.—Extension and renovating the vestry room of the Capel Newydd Llanddarog. T. Davies, architect, Harddfan, Upper Tumble, Llanelly.

✱AUGUST 27.—**Northampton.**—HOUSES.—Erection of 113 houses of brick or special forms of construction on the Gipsy-lane estate, for the Housing and Town-Planning Committee of the County Borough. Alfred Fidler, M.Inst.C.E., Borough Engineer, Guildhall, Northampton. Deposit £5 (crossed cheques to be made payable to the Northampton Corporation).

AUGUST 28.—**Hebden Bridge.**—PAINTING.—Decoration of Hope Baptist Chapel, Hebden Bridge. Sutcliffe & Sutcliffe, architects, New-road, Hebden Bridge.

AUGUST 28.—**Southampton.**—HOUSES.—Erection of 46 houses on Block 3 of the Burgess-road housing site, for the T.C. Borough Engineer, Southampton Deposit £2 2s.

AUGUST 29.—**Cardiff.**—HOUSES.—Twelve houses at Pentyrch, for the R.D.C. Richards & McLean, architects, 5, Dumfries-place. Deposit £2.

AUGUST 30.—**Bebington and Bromborough.**—HOUSES.—100 houses on the housing site, for the U.D.C. H. W. Corrie, surveyor. Deposit £2 2s.

AUGUST 30.—**Westhampnett.**—HOUSES.—Erection of 22 houses in the parishes of West Wittering and West Stoke, for the R.D.C. Mr. W. D. Rasell, Clerk, Council Offices, Pallant House, Chichester.

AUGUST 31.—**Barking.**—EXTENSION.—Construction of foundations and buildings for the extensions at Barking power station, for the County of London Electric Supply Co., Ltd. Sir Alexander Gibb & Partners, Queen Anne's Lodge, London, S.W.1. Deposit £15 15s.

AUGUST 31.—**Dunoon.**—EXTENSIONS.—For (1) new operating theatre and ward kitchen; (2) alterations to laundry block; (3) new four-apartment lodge, at District Cottage Hospital, for the Committee. John Burnet, Son & Dick, architects, 239, St. Vincent-street, Glasgow.

*AUGUST 31.—**Goole.**—ALTERATIONS AND EXTENSIONS.—To the Post Office and Telephone Exchange, for the Commissioners H.M.O.W., King Charles-street, London, S.W.1. Deposit £1 1s. (Cheques payable to the Commissioners.)

AUGUST 31.—**Hulme.**—EXTENSION.—Building new science block, gymnasium, and extension to hall at the Hulme Grammar School, Alexandra Park, Manchester. Francis Jones & H. A. Dalrymple, architects, 178, Oxford-road. Deposit £1 1s.

AUGUST 31.—**North Shields.**—IMPROVEMENTS.—Construction of a new quay, transit shed, passenger platform, railways, &c., at the river wall, Albert Edward dock, North Shields, for the Tyne Improvement Commission. A. Blacklock, secretary, Tyne Improvement Commission Offices, Bewick-street, Newcastle-upon-Tyne. Deposit £10 10s.

AUGUST 31.—**Sheerness.**—HOUSES.—Erection of 20 parlour-type houses in blocks of two, three, and four, for the U.D.C. Mr. W. P. Puddicombe, Engineer, Council Offices, Sheerness. Deposit £2 2s.

*AUGUST 31.—**Stafford.**—ADDITION AND ADAPTATION.—(*a*) Darlaston, Slater-street Council School, erection of new department for 336 infants, with assembly hall, staff rooms, cloakrooms, out offices, &c., also for extension of existing building; (*b*) Darlaston, Salisbury-street Council School, adaptation of existing buildings as an upper standard school, including the erection of four additional classrooms, science laboratory, assembly hall, staff rooms, &c., for the Staffordshire Education Committee. F. A. Hughes, Director of Education, County Education Offices, Stafford. Deposit £6 6s. (£3 3s. for each).

*AUGUST 31.—**Whitby.**—ADDITIONS.—Completion of certain additions to the band pavilion, West Cliff, Whitby, for the U.D.C. L. M. Blanchard, surveyor to the Council, Council Offices, Whitby. Deposit, £1 1s.

SEPTEMBER 1.—**Athlone.**—HOUSES.—Twelve houses (semi-detached) and the construction of sewers and water mains in connection, for the U.D.C. P. J. O'Loughlin, Town Surveyor, The Courthouse. Deposit £2.

SEPTEMBER 1.—**Athlone.**—Reconstruction of waterworks pump-house and erection of new filter house, for the U.D.C. P. J. O'Loughlin, Town Surveyor, The Courthouse. Deposit £5.

*SEPTEMBER 1.—**London.**—ALTERATION AND EXTENSION.—To the Electricity sub-station at Evelyn-street, Hoxton, N.1, for the Metropolitan Borough Council of Shoreditch. T. L. Hustler, Borough Surveyor, Town Hall, Old-street, E.C.2. Deposit £2 2s.

SEPTEMBER 2.—**Keynsham.**—HOUSES.—Fourteen houses on the housing site at Whitchurch, in connection with which the construction of suitable means for the treatment of the drainage from the houses is required, for the R.D.C. H. W. Argile, Building Surveyor, 16, High-street, Keynsham, near Bristol.

SEPTEMBER 2.—**Sutton-in-Ashfield.**—HOUSES.—For the erection of 120 dwelling-houses, parlour and non-parlour types, to be erected in pairs and blocks of four, and the construction of new roads, approaches, and sewers. The scheme is divided into five sections. Messrs. Warner & Bocock, architects, Mansfield Road, Sutton-in-Ashfield. Deposit £3 3s.

SEPTEMBER 3.—**Coventry.**—GENERATING STATION.—Buildings, foundations and subways, and steam and water pipework, and cooling towers, &c., for the T.C. G. Tough, Engineer and Manager. Deposit £5 5s.

*SEPTEMBER 4.—**Conway.**—HOUSES.—Erection and completion of 76 houses on the housing site, The Morfa, Conway, for the Corporation. F. A. Delamotte, A.M.I.C.E., Borough Engineer, Municipal Buildings, Conway. Deposit £2 2s.

SEPTEMBER 10.—**Chailey.**—HOUSES.—Erection of 115 houses, for the R.D.C. Mr. H. J. Tillson, Clerk Union Offices, West-street, Lewes, Sussex.

*SEPTEMBER 11.—**Rochford.**—HOUSES.—Erection of 66, as follows: 34 in Rochford, 20 in Canewdon, and 12 Little Wakering, for the R.D.C. A. C. Madge, Surveyor to the Council, Rayleigh, Essex. Deposit 1 guinea.

*SEPTEMBER 14.—**London.**—HOSPITAL BUILDINGS.—Erection of an administration block, ward block, laundry block, caretaker's lodge, and outbuildings; re-conditioning of existing ward block at the Willesden U.D.C. Small-pox Hospital, Kingsbury, Middlesex. F. Wilkinson, Engineer to the Council, Town Hall, Dyne-road, Kilburn, N.W.6.

SEPTEMBER 14.—**Upton.**—SCHOOL.—Erection of school for 350 children at Upton, for the West Riding Education Committee. Education Department, County Hall, Wakefield.

NO DATE.—**Frimley.**—HOUSES.—Erection of 12 pairs of semi-detached houses in Chobham-road, for the U.D.C. W. H. Tucker, Council's Architect, "Ayston," Firwood-drive, Camberley. Deposit, £2 2s.

NO DATE.—**West Melton.**—HALL.—For erection of Church Hall, West Melton. Mr. Herbert Smith, architect, West Hall, Wentworth, near Rotherham.

MATERIALS, etc.

AUGUST 18.—**Sunderland.**—BRUSHES.—Supply for six months of circular brushes and bass brooms. Borough Engineer, Town Hall, Sunderland.

AUGUST 20.—**Dublin.**—MATERIALS.—Supply of 600 tons tar macadam, 200 tons tar chippings, 3,250 tons broken whinstone, 300 tons broken chippings, 300 tons whinstone fines, 2,000 tons cement, 11,000 tons unscreened concrete aggregate, and 2,750 tons of unscreened sand, to Town Commissioners, Supplies Department, Dublin.

AUGUST 20.—**Sunderland.**—CEMENT.—Supply of Portland cement to the T.C., for six months. Mr. H. Craven, Town Clerk, Town Hall, Sunderland.

AUGUST 21.—**Elham.**—SANITARY GOODS.—Supplying and fixing of five white glazed Vulcan fireclay urinals and five white glazed Vulcan fireclay hospital hoppers, at the institution, for the Board of Guardians. Mr. Edward F. Webb, Clerk, 29, Bouverie-square, Folkestone.

AUGUST 24.—**India.**—STOVES, &c.—(1) Two steam-driven locomotive travelling jib cranes; (2) 10,800 platelayers' and firemen's shovels. India Store Department, Belvedere-road, S.E. Charge 5s.

AUGUST 28.—**Stockton-on-Tees.**—MATERIALS.—For materials and stores for six months. Borough Engineer, Stockton-on-Tees.

AUGUST 31.—**Hammersmith.**—MATERIALS.—Six months' supply of carpenters' and engineers' sundries, builders' materials, &c., to the B.G. Clerk, 206, Goldhawk-road, W.

SEPTEMBER 4.—**Brentford.**—MATERIALS.—Supply to the U.D.C. of shingle, lime and cement, oils and oilmen's sundries. Surveyor, Clifden House, Brentford.

SEPTEMBER 7.—**Hull.**—STORES.—Supply of stores for one year to the Humber Conservancy Board. A. W. Franklin, secretary, Conservancy-buildings, Hull.

ENGINEERING, IRON AND STEEL.

AUGUST 16.—**Manchester.**—BRIDGE.—Bridge to carry Nuthurst-road over the L.M. & S. Rly., Moston, for the T.C. City Engineer. Deposit £3 3s.

AUGUST 16.—**Sittingbourne.**—ELECTRIC LIGHTING.—Electric lighting installation of Hospital Buildings, for the Sittingbourne and Milton Joint Hospital Board. Mr. T. W. Ellis, 70, Victoria-street, S.W.1 Deposit £2 2s.

AUGUST 17.—**Preston.**—GROIN.—Erection of a groin on the River Ribble, near the north-east corner of the sewage works at Ribchester, for the R.D.C. Mr. J. R. Raylor, highway surveyor, 160, Walker-street, Preston.

AUGUST 18.—**Lanchester.**—BRIDGE.—Reinforced concrete bridge over Hisehope Barn, near Muggleswick, for the R.D.C. W. Cumming, surveyor.

AUGUST 20.—**India.**—ROOF-WORK.—Supply of roof-work, for South Indian Railway Co. Offices, 91, Petty France, Westminster, S.W.1. Charge 10s.

AUGUST 21.—**Skirlaugh.**—BRIDGE.—Widening of Water Mill bridge. Skirlaugh, for the East Riding of Yorkshire C.C. County Surveyor, County Hall, Beverley.

AUGUST 23.—**Belfast.**—IRONWORK.—Construction of galvanised wrot ironwork at the Main Drainage outfall works, for the T.C. City Surveyor, City Hall, Belfast.

AUGUST 30.—**Hackney.**—LIFTS.—Installation of electric goods and service lifts at Hackney Institute, for the L.C.C. Chief engineer, Old County Hall, S.W. Deposit, £1.

AUGUST 25.—**Manchester.**—LIFT.—For an electric goods lift at the Victoria-square dwellings, Oldham-road, for the T.C. City Architect, Housing Dept., Civic Buildings, 1, Mount-street, Manchester.

AUGUST 30.—**Manchester.**—BRIDGE.—For the widening, &c., of Oxford-road Bridge, over the River Medlock, for the T.C. City Engineer's Office, Town Hall, Manchester. Deposit £3 3s.

AUGUST 30.—**Saxmundham.**—BRIDGE.—For the building of a ferro-concrete skew bridge of 32 ft. clear span on ferro-concrete piles, and the demolition of a brick arch bridge at Rendham, three miles west of Saxmundham, on the Saxmundham-Framlingham-road, for the East Suffolk C.C. W. Jervis, county surveyor, County Hall, Ipswich.

AUGUST 31.—**Barnoldswick.**—RESERVOIR.—Construction of an impounding reservoir with a final capacity of 100 million gallons at Elslack Moor, near Skipton, Yorks, for the U.D.C. E. J. Silcock, Consulting Engineer, 25, Victoria-street, Westminster. Deposit £10.

SEPTEMBER 13.—**St. Marylebone.**—RUNWAY.—Supply and fixing of an electric overhead runway for removing house refuse from storage pit to screening plant, together with steel-frame building. Borough Engineer, Town Hall, Marylebone-road, N.W.1.

SEPTEMBER 15.—**Siam.**—BRIDGES.—Superstructures of steel railway bridges, for the Administration of the Royal State Railways of Siam, Bangkok. C. P. Sandberg, 40, Grosvenor-gardens, London, S.W.1. Charge £1 10s.

DECEMBER 1.—**Denmark.**—BRIDGE.—Construction of the superstructure, substructure, as well as approach spans, with shore piers, for a double-track railway bridge across Lillebelt, for the Danish State Railways. Danish Legation, London. Deposit, Danish Kroner 500.

NO DATE.—**Dundee.**—PIER EXTENSION.—Widening and extension of Newport Pier, for the Dundee Harbour Trust. Mr. J. Hannay Thompson, general manager, Harbour Chambers, Dundee. Deposit, £5 5s.

NO DATE.—**Salford.**—REPAIRS.—For testing and repairing of weighing machines at the various gasworks, for the T.C. Gas Engineer, Salford.

ROAD, SEWERAGE, AND WATER WORKS.

AUGUST 16.—**Dingwall.**—ROADS.—For laying down about 2,600 sq. yds. bituminous, or bituminous grouted, macadam surfacing and about 9,500 sq. yds. surface spraying, &c., for the T.C. Messrs. J. & W. S. Dewar, Town Clerks, Dingwall.

AUGUST 16.—**Northwich.**—PAVING.—Of about 1,900 super yards of Haslingden or Rossendale 5 in. setts on Castle Hill, for the U.D.C. J. Brooke, engineer and surveyor. Deposit £2 2s.

AUGUST 16.—**Oldham.**—ROADS.—For street works in Heron-street, Melling-road, and a number of passages, for the T.C. Borough Engineer. Town Hall, Oldham.

AUGUST 16.—**Ossett.**—SEWERS.—Construction of sewers and foundations for new road, for the T.C. Mr. H. Holmes, Borough Engineer, Town Hall, Ossett.

AUGUST 17.—**Padstow.**—RESERVOIR.—For (1) the laying of a 3 in. water main about 1,400 yds.; (2) building a concrete supplementary reservoir, or balancing chamber, for the U.D.C. Fred. A. Williams, clerk.

AUGUST 17.—**Salcombe.**—ROADS.—For the making up of Raleigh-road, for the U.D.C. Mr. J. G. Howard Surveyor, Council Hall, Salcombe. Deposit £2 2s.

AUGUST 18.—**Bushey.**—SEWER.—Construction of about 113 yds. lin. of 9 in. glazed stoneware pipe sewer, complete with manholes, for the U.D.C. E. E. Ryder, engineer and surveyor. Deposit £2 2s.

AUGUST 18.—**Narberth.**—ROADS.—Reconstruction of Robeston Wathen-Penblewin-road, for the R.D.C. Mr. Henry Lewis, Clerk, Market-square, Narberth.

AUGUST 18.—**Rawtenstall.**—IMPROVEMENTS.—Sewering and paving, &c., of back Osborne-terrace, Whitewell Bottom, Waterfoot for the T.C. Borough Surveyor. Deposit £1.

AUGUST 18.—**Tipton.**—VARIOUS WORKS.—(1) Repairs to playgrounds (including resurfacing); (2) reconstruction of fencing; (3) reconstruction of heating apparatus (including provision of new boiler) for the T.C. Messrs. Scott & Clark, architects, Wednesbury.

AUGUST 18.—**Whitley and Monkseaton.**—SEWERS.—Construction of 12 in. by 9 in. sewers in the footway of Blyth-road, for the U.D.C. Mr. A. J. Rousel, Surveyor, Council Offices, Whitley Bay.

AUGUST 20.—**Kendal.**—ROADS.—For laying and jointing 540 lineal yards of 10 in. and 9 in. cast-iron pipes in connection with pumping plant at sewage disposal works, for the T.C. Mr. F. W. Oxberry, Borough Surveyor, Town Hall, Kendal.

AUGUST 21.—**Stretford.**—ROADS.—For paving in rock asphalte, &c., the following streets: King's-road (Skerton-road to Cheshire Lines Railway) and Skerton-road (Lime-grove to King's-road), for the U.D.C. Council Offices, Old Trafford. Deposit £2 2s.

AUGUST 23.—**Cockermouth.**—WIDENING.—Widening, and resurfacing the Borrowdale-road, and for carrying out certain improvements in connection therewith, and all works incidental thereto, from the Lodore Hotel to the Hamlet of Seatoller, for the R.D.C. Highway Surveyor.

AUGUST 23.—**Holme Cultram.**—SEWERAGE.—Laying making and construction of sewerage works in West Silloth, Greenrow, Blitterlees, and a portion of Skinburness, and a storm water drain in Silloth, all in the county of Cumberland, for the U.D.C. J. C. Boyd, engineer, 18, Bank-street, Carlisle. Deposit £3 3s.

AUGUST 23.—**North Bromsgrove.**—DRAINAGE.—Reconstruction, kerbing, and surface water drainage e Rose-hill, Rednal, for the U.D.C. Mr. G. W. Booth Surveyor, Catshill, Bromsgrove.

AUGUST 23.—**Rugby.**—WATER MAINS.—For laying 1,270 lineal yards of 4-in. cast iron water mains in the parish of Hillmorton, for the R.D.C. Mr. J. E. Weeks, Surveyor, Temple-street, Rugby. Deposit £1 1s.

AUGUST 24.—**Brentford.**—SEWER.—Supply and laying of approximately 577 yds. lin. of 9 in. glazed stoneware pipe soil sewer at Lionel-road, for the U.D.C. Mr. W. J. W. Westlake, Engineer, Clifden House, Brentford.

AUGUST 24.—**Pontefract.**—MAKING-UP.—Street works in Fairfield-avenue and St. Bernard's-avenue, for the T.C. Borough Engineer. Deposit £2 2s.

AUGUST 24.—**Salcombe.**—ROADS.—For the making-up of (1) Beadon-road, (2) Sandhills-road, for the U.D.C. Mr. J. G. Howard, Surveyor, Council Hall, Salcombe. Deposit £2 2s.

AUGUST 25.—**Goole.**—ROADS.—For the making-up of Charter-road, for the U.D.C. Mr. J. H. Castle, Surveyor, Council Offices, Goole. Deposit £3 3s.

AUGUST 25.—**Hendon.**—ROADS.—For re-paving the Stores Yard at Colindale Hospital, Colindale-avenue, Hendon, N.W., for the Metropolitan Asylums Board. Office of the Board, Victoria Embankmenti E.C.4. Deposit £1.

AUGUST 25.—**London.**—RE-PAVING.—The Stores Yard at Colindale Hospital, Colindale-avenue, Hendon, N.W., for the Metropolitan Asylums Board. Office of the Board, Victoria Embankment, E.C.4. Deposit £1.

AUGUST 26.—**Camberwell.**—ROADS.—Construction of roadways, footways, drainage works &c., at the new cemetery, Honor Oak, for the B.C. Mr. William Bell, Borough Engineer, Town Hall, Peckham-road, Camberwell, S.E.5.

AUGUST 26.—**Southwell.**—SEWERAGE.—For first section of a scheme of sewerage and sewage disposal for the parishes of Ollerton and Boughton, for the R.D.C. Messrs. Sands & Walker, Milton Chambers, Nottingham. Deposit £3 3s.

AUGUST 27.—**Devon.**—WIDENING.—Reconstruction and widening of approximately seven miles of the Exeter-Plymouth main road, for the C.C. A. Warren, County Surveyor, Avenue-road, Newton Abbot. Deposit £10 10s.

AUGUST 27.—**Ellesmere Port.**—ROADS.—Reconstruction of the footway between Carnegie-street and Meadow-lane, Ellesmere Port, for the U.D.C. Surveyor, Council Offices, Ellesmere Port.

AUGUST 28.—**Swindon.**—SEWERS.—Sewers and other incidental works in Marlborough-road, Broome-lane, and in lands on the west side of Marlborough-lane, for the T.C. J. B. L. Thompson, Borough Surveyor, 34, Regent-circus.

AUGUST 30.—**Guildford.**—ROADS.—For the construction of short length of 9 in. stoneware soil sewer at Woodlands-road, for the T.C. Mr. J. W. Hipwood, Borough Surveyor, Tuns Gate, Guildford.

AUGUST 31.—**Barnoldswick.**—RESERVOIR.—For first instalment of works necessary for the construction of an impounding reservoir, with a final capacity of 100 million gallons, at Elslack Moor, near Skipton, for the U.D.C. Mr. E. J. Silcock, 25, Victoria-street, Westminster. Deposit £10.

SEPTEMBER 1.—**Ebbw Vale.**—ROADS.—Construction of footpaths, steps, fencing, and the erection of a footbridge over the Great Western Railway at Cwm, for the U.D.C. Mr. P. I. Davies, Council Offices, Ebbw Vale. Deposit £2.

*SEPTEMBER 4.—**Conway.**—ROADS AND SEWERS.—Road construction work and works of sewage in connection with the housing scheme on the Morfa, Conway, for the Corporation. F. A. Delamotte, A.M.I.C.E., Borough Engineer, Conway. Deposit £2 2s.

SEPTEMBER 4.—**Penrith.**—WATER WORKS.—Construction of a filter house, settling tank, sludge lagoon, laying of water mains, and other incidental works, for the U.D.C. Mr. T. H. Longstaff, Water Engineer, Town Hall, Penrith. Deposit £2 2s.

SEPTEMBER 6.—**Leatherhead.**—SEWERAGE WORKS.—Construction of tanks, percolating and contact filters, and other works, at the Outfall, Randalls-road, for the U.D.C. Mr. William Fairley, Parliament Mansions, Victoria-street, Westminster, S.W.1. Deposit £3 3s.

NO DATE.—**Burnham-on-Crouch.**—MAKING UP.—Coronation-road, for the U.D.C. Mr. J. Cook, Surveyor, Council Offices, Burnham-on-Crouch.

NO DATE.—**Caernarvonshire.**—ROADS.—Widening and improving the section of the Holyhead-road between the Caernarvon-road Junction at Capel Curig and the Waterloo Bridge at Bettwsycoed, for the C.C. Mr. T. Owen, County Surveyor, County Offices, Caernarvon. Deposit £25.

NO DATE.—**Shirley.**—ROAD.—Construction and sewering of a new road at Shirley, Southampton, for Whithedswood Estates, Ltd. B. H. Waller, Chartered Surveyor, 17, Above Bar, Southampton.

Auction Sales. Tenders. etc.

✱AUGUST 17.—**London.**—Veryard & Yates will sell, without reserve, at 255, Clapham-road, S.W., useful building materials, fittings, &c. Auctioneers, 365, Norwood-road, S.E.27.

✱AUGUST 18.—**London.**—C. E. Clark will sell, without reserve, at Wimbledon Park schools, Wellington-road, Wimbledon Park, S.W.19, near "The Woodman," bus route 177A, and Wimbledon Park station, District Railway, clearance sale of timber and building material (recovered from the demolition of temporary schools). Auctioneers, Victoria House, 117, Victoria-street, S.W.1.

✱AUGUST 18.—**London.**—Charles R. Davis & Co. will sell, under a deed of arrangement *re* W. J. Jennings, trading as W. J. Jennings & Co., by Order of the Trustees, upon the premises, No. 26, Brook-mews and No. 1A, Elm-mews, Lancaster Gate, W.2, the whole of the builders', contractors' an decorators' stock-in-trade, plant, and machinery, builders' and general ironmongery, contents of paint shop. Auctioneers, 285, High-street, S.E.1.

AUGUST 19.—**Kent.**—**Henry Butcher, Hall & Co.** will sell, at the George Hotel, Lydd, freehold railside land and buildings, known as The Lydd site, and 27 acres. Auctioneers, 63 and 64, Chancery-lane, London, W.C.2.

✱AUGUST 24.—**Leicester.**—Perry & Phillips, on the premises, Bradgate House, Leicester, the whole of the valuable interior and exterior fixtures and fittings in and about the mansion. The fabric of the mansion will be sold at a later date.—Auctioneers, 59, High-street, Bridgnorth.

✱AUGUST 25.—**Hayes, Middlesex.**—C. E. Clark will sell, without reserve, on the building site, Sandow-road, Hayes, Middlesex, one minute from Hayes station (G.W.R.), clearance sale of huts, timber, and building material. Auctioneers, 117, Victoria-street, S.W.1.

SEPTEMBER 3.—**London, E.C.**—**Fuller, Horsey, Sons & Cassell** will sell by order of Perry & Co., Ltd., in lots, at the Merchants' Hall, Baltic Exchange, St. Mary Axe, E.C., clearance sale of the remaining plant and stock owing to the expiration of lease. Auctioneers, 11, Billiter-square, E.C.3.

SEPTEMBER 14.—**Hammersmith.**—By order of the Hammersmith B.C. To be sold by tender as a whole or in two lots, freehold building estate of 3¼ acres, known as "Parkside" Ravenscourt Park, and No. 17, Ravenscourt Park, Hammersmith, extending back to the rear of the gardens of residences in Goldhawk-road, and having upon it two detached residences, cottage, and outbuilding. Vacant possession on completion. Town Clerk, Town Hall, Hammersmith, W.6.

✱SEPTEMBER 15.—**London.**—Knight, Frank & Rutley will offer for sale, as a whole or in lots, in the Hanover-square Estate Room, by direction of the Ealing and Acton Borough Councils, freehold building land close to Ealing Common, comprising the northern and western frontages of Gunnersbury Park (frontage about 3,735 ft. to Pope's-lane and Lionel-road); all public conveniences; no road-making; vacant possession on completion of the purchase. Auctioneers, 20, Hanover-square, W. 1.

✱SEPTEMBER 16.—**New Ferry.**—Paterson & Thomas will sell at the Law Association Rooms, 14 Cook-street, Liverpool (subject to conditions of sale and to not having been previously disposed of by private treaty), 20,795 sq. yds. of land in Stanley-road, New Ferry, together with the family residence erected on part thereof, known as 31, Stanley-road. Auctioneers, 16, Cook-street, Liverpool.

✱SEPTEMBER 17.—**Littlestone-on-Sea.**—Knight, Frank & Rutley will offer for sale, in numerous lots, in the Hall, Littlestone-on-Sea (kindly lent by Sir Robert Perks), freehold building plots, 30 private residences and cottages, and the Grand Hotel, on the Littlestone-on-Sea Estate; also adjoining accommodation holdings, arable and grazing land, comprising in all an area of about 700 acres. Auctioneers, 20, Hanover-square, W.1; and 41, Bank-street, Ashford, Kent.

SEPTEMBER 22.—**London.**—**Knight, Frank & Rutley** will sell, in the **Hanover-square Estate Sale Room** (unless previously sold privately), **Barnet**, freehold residential and building estate situated on the Great North-road, known as **Greenhill Park**, comprising desirable residence, also three well-situated private residences—"Park Lodge," Station-road, "Woodlands," Gloucester-road West, "Gothic Cottage"—valuable building land extending to about 41½ acres. With the exception of "Gothic Cottage," vacant possession will be given on completion of the purchase Auctioneers, 20, Hanover square, W.1.

Competitions.

(*See Competition News page* 236.)

Public Appointments.

AUGUST 16.—**London.**—Assistant to Clerk of Works on the maintenance of the Borough Council's housing estate, for the Woolwich Borough Council. Arthur B. Bryceson, Town Clerk, Town Hall, Woolwich, S.E.18.

AUGUST 18.—**Luton.**—Clerk of Works in connection with housing scheme for 250 houses, and other work (the appointment being a temporary one), by the B.C. J. W. Tomlinson, A.M.I.C.E., Borough Engineer and Surveyor, 18, Upper George-street, Luton.

AUGUST 20.—**Southampton.**—Assistant required in the County Architect's Department by the Corporation. A. L. Roberts, County Architect, The Castle, Winchester.

AUGUST 20.—**Stoke-on-Trent.**—JUNIOR ARCHITECTURAL ASSISTANT.—In Building Surveyor's Department, required by the Corporation. A. Burton, M.Inst.C.E., F.S.I., City Engineer and Surveyor, Town Hall, Stoke-on-Trent.

SEPTEMBER 3.—**Rotherham.**—CHIEF ARCHITECTURAL ASSISTANT.—Required by the Town Council. Vincent Turner, M.Inst.C.E., Borough Engineer, Town Hall, Rotherham.

SEPTEMBER 4.—**London.**—Assistant Architect required by the Board of Control (Lunacy and Mental Deficiency). Secretary, Board of Control, 66, Victoria-street, London, S.W.1.

SEPTEMBER 10.—**London.**—Lecturer-Instructor in plumbing (Technical and Practical) for three or four evenings per week, commencing end of September. The Director of Education, The Polytechnic, 309 Regent-street, W.1.

✱SEPTEMBER 16.—**Reading.**—Architectural and building assistant in the Borough Surveyor's Office required by the County Borough Council. C. S. Johnson, Town Clerk, Town Hall, Reading endorsed "Architectural and Buildings Assistant."

✱NO DATE.—**Iraq.**—Assistant architect required for service in the Public Works Department of Iraq for three years' service, with possible extension. Apply at once by letter, Crown Agents for the Colonies, 4, Millbank, London, S.W.1, quoting M/14745.

✱NO DATE.—**Nigeria.**—Architect required by the Public Works Dept. of Nigeria for two tours of 12-18 months' service, with possible permanency. Crown Agents for the Colonies, 4, Millbank, Westminster, London, S.W.1, quoting M/14753.

Building Trade Dispute.

It is reported that a new crisis in the building trade is threatened by a dispute which has arisen at Croydon over the letting of work by a firm, carrying out a contract for the borough council, to a piece-work employer instead of to a recognised sub-contractor. This action led to a strike of members of the Amalgamated Union of Building Trade Workers, which is now in its third week. An old issue has been revived, and the London Master Builders' Association, we understand, has seized on the principle involved and has notified the union that, unless the men on strike return to work by Monday, they will carry the matter to the National Federation of Building Trades Employers. The union, in reply, has claimed freedom of action.

Northfleet House Estate.

The Chairman of the Council (Councillor H. P. Dean, J.P.) on Saturday, August 7, formally opened the first block of houses erected on the Northfleet housing estate. The Council are erecting 96 houses on this estate by direct labour, the houses being of the parlour type, with three bedrooms, and are being let at 8s. 7d. per week, plus rates, which, it is estimated, will be 3s. 10d. per week. Each house is electrically lit, and gas is also laid on, and the cost of the first 26 houses is estimated at £455 and the remaining 70 houses are estimated at £420. The actual erection of these houses is being carried out with unskilled local labour, approximately 100 men being employed. The houses are of concrete construction, and are being erected on the Newman system of mono-block construction, which is of the pier and panel type, one of the features of this system being that no timber shuttering is required, the blocks and slabs being grouted in as the work proceeds. The whole system is interlocking. The houses are being erected under the direction of the Council's Housing Surveyor, Mr. E. Talbot Fox, M.I.M.C.E.

PROPOSED NEW BUILDINGS & OTHER WORKS*.

IN these lists care is taken to ensure the accuracy of the information given, but it may occasionally happen that, owing to building owners taking the responsibility of commencing work before plans are finally approved by the local authorities, "proposed" works at the time of publication have been actually commenced. Abbreviations: T.C. for Town Council; U.D.C. for Urban District Council; R.D.C. for Rural District Council; E.C. for Education Committee; B.G. for Board of Guardians; B.C. for Borough Council; P.C. for Parish Council; M.H. for Ministry of Health; M.T. for Ministry of Transport; C.B. for County Borough; B.E. for Board of Education; M.A.B. for Metropolitan Asylums Board; and M.W.B. for Metropolitan Water Board.

AYLESBURY.—Preliminary plans for new Council Offices have been prepared by the Bucks County Surveyor. The cost is estimated at £74 000.

BACUP.—Application is being made by the T.C. to the Ministry of Health for sanction to the borrowing of £12,815 for the erection of 20 non-parlour houses on the land facing Booth-road, at Heath Hill estate, the sum to include the cost of drainage and roads.

BATH.—The T.C. has approved an amended plan of alterations to the lounge and drawing-room at the Grand Pump Room Hotel.—The B.E. has generally approved the plans of the proposed extension of the girls' secondary school and has sanctioned the taking out of the quantities. Tenders are to be obtained.

BEXLEY.—Plans passed: A. H. Jennings, for C. D. Bowyer, 36 houses, Brampton-road; T. H. Jones, 16 houses, Little Dawson Estate.

BLACKPOOL.—Plans passed by T.C.: Ten houses, Chislehurst-avenue, for G. A. S. Graham; 52 houses, Buckley-crescent, for R. Wilson, Ltd.; six houses, Buckley-crescent, for Mr. Benyon; 21 houses, Beardshaw and Boardman-avenues, for Beardshaw & Boardman; church, Whitegate-drive, for Christian Science Church Committee.

BOLTON.—Plans passed by T.C.: Twelve houses, off Heynes-street, for J. S. Hughes.

BURNLEY.—The T.C. has passed plans for eight houses in Willis-street for H. Southworth.—The borough engineer has been instructed to prepare plans for shops on the King William-street side of the Market.

CATERHAM.—Sanction has been received by the U.D.C. to borrow £2,040 for additions to the Council buildings.—Plans passed: T. W. Stuchberry, nine houses.

CHORLEY.—An inquiry has been held by the Ministry of Health into the application of the T.C. to borrow £19,991 for the making up of 19 streets.

CLACTON-ON-SEA.—Plans passed by U.D.C.: Clacton Building Co, six houses, London-road; E. J. Ferguson, 8 houses, Valley-road; A. H. Brown, six houses, Branston-road.

CONWAY.—Seventy-six houses are to be erected by the T.C.

CROYDON.—The C.B. has approved plans for the provision of additional cloakrooms and lavatories in connection with the large swimming bath at Croydon, which is necessary for its proper use as a hall, the estimated cost being £750. Tenders are to be obtained.—The Council has received an offer on behalf of the Assembly of Clifton Hall, Whitehorse-lane, to purchase for the erection of a church room or schools 60 ft. of building frontage to the public portion of Ladbrook-road.

DARLINGTON.—Plans passed by T.C.: Nine houses, Elton and other roads, Woodside Estates, Ltd.; fourteen houses, Langdale-road, for W. Lyall; four houses and shops, Longfield and Durham-roads, for H. B. Richardson; new streets off Durham-road, for J. E. Chilton; mortuary, &c., F. Clark & Son, for B.G.—Notices are to be served on the owners of Russell-street back to make up the road.

DARTFORD.—Plans passed by U.D.C.: R. Brown, ten pairs semi-detached houses, London-road; J. B. Walton, six shops and houses, off High-street.

DONCASTER.—Application is to be made by the T.C. to the Electricity Commissioners for sanction to the borrowing of £4,275 to cover the cost of furnishing electricity supplies to the Warmsworth-road (South) Housing site.—Sanction has been received for the borrowing of £33,100 for new gas plant.—The Watch Committee has under consideration a scheme for a new fire station.

DUBLIN.—A reinforced concrete stand to accommodate 4,000 people is to be constructed on the eastern bank of Lansdowne-road by the Irish Rugby Football Union.—South Dublin R.D.C. has approved a scheme submitted by the surveyor, Mr. T. B. Byrne, for building 60 cottages—in Rathfarnham (16), Crumlin (14), Whitechurch (2), Chapelizod (19), Clondalkin (9). A Government grant of £23,000 is available for the scheme.

EASTBOURNE.—Plans passed by the T.C.: Six houses, J. Thurlow & Son, St. Phillip's-avenue; four houses and garages, Weller & Seymour, King's-avenue.

EAST HAM.—The B.C. is to carry out renovations to various libraries at a cost of £319. The work is to be done by the Borough Engineer. The Council has recommended the scheme for additional office accommodation, and application is to be made to the M.H. for sanction to borrow the sum of £7,300 for the work.

ETON.—The U.D.C. has decided to erect 40 houses at an estimated cost of £29.137, subject to the sanction of the Ministry of Health and the Ministry of Agriculture. The six-acre site obtained will accommodate 72 houses.

FAWLEY.—It is proposed by the Southampton C.C. to expend £5,000 on the enlargement of the County School.

* See also our List of Contracts, Competitions, etc.

FRIERN BARNET.—A. Robertson, six houses, Friern-lane.

HALIFAX.—The Building Committee has passed plans for 24 additional bungalows on the Pye Nest Estate, for Mrs. G. H. Wilson.

HARROGATE.—Plans have been passed for a new estate off Rossett-drive and St. George's-road, for the exors. of the late A. Rushworth and the trustees of the late T. C. Curtis.

HENDON.—Plans passed by U.D.C.: Twenty-two garages and 16 shops with flats over, Finchley-road, for J. Gibb, junr.; lay-out of roads on Colin Park Estate, for E. G. Trobridge; two shops, 22 garages and office, Finchley-road, for A. H. C. Arnell; six houses, Colindeep-lane, for J. B. Osberg; six houses, North Circular-road, for C. B. Heygate; eight houses, Booth-road, for H. Holmes; new street, off Station-road, for Done, Hunter & Co.; 29 houses, Tenterden-road, for Messrs. Pritchard; twelve houses, Colindeep-lane, for E. G. Trobridge; memorial hall, Lawrence-street, for Walker & Harwood; factory, Colindale-avenue, for Messrs. Salter; new street, Upper Hale Estate, for G. Williams; 16 houses, Sunbury-gardens, for C. Bastable; six houses, Brampton-grove, for Welch & Hollis; Aish & Cartwright, 18 houses, Hill View-gardens; Lloyds Bank, premises, Pinner-road.

HULL.—Applications for subsidy have been granted in respect of the following proposed buildings: Watts & Waller, 19 houses, North-road; J. Emmerson, nine houses, Boothferry-road; C. H. Smith, six houses, Savery-street; C. H. Smith, ten houses, Kelvin-street; G. T. Spruit, 21 houses, Lake View Estate; R. W. Trigg, seven houses, Somme-street.

KIRKBURTON.—It has been decided by the U.D.C. to erect 17 houses on a site at Tunshaw.

LONDON (FULHAM).—Tenders are to be invited by the B.C. for alteration to 587–591, Fulham-road.

LONDON (KENSINGTON).—The B.C. are to erect 16 flats in Threshers-place, at a cost of £11,800.—The B.C. has received the L.C.C. sanction to the borrowing of £20,000 in respect of expenditure to be incurred in connection with the provision of cottages and flats representing the Virginia-place housing scheme.

LONDON (WESTMINSTER).—Plans prepared by Mr. A. N. Prentice for a building on the Orange-street site to be approved by the C.C.

LONDON (WOOLWICH).—The B.C. recommend that applications be made to the L.C.C. for sanctions to borrow the sum of £31,882, for the erection of 55 houses on the Council's Housing Estate at Eltham, £1,543 for the erection of a permanent Estate Office.—The Council recommend that, subject to the approval of the M.H., (*a*) the basement rooms of the Old Town Hall be altered at an estimated cost of £750 for the purposes of a maternity and child welfare centre, and (*b*) that an artificial sunlight clinic be established at a further estimated cost of £140.—The B.C. also recommend: (*a*) That a further 55 houses on Section "C" of the Council's Housing Estate at Eltham, sanctioned by the M.H., be erected by direct labour under the supervision of the Borough Engineer, at an estimated cost of £31,882 10s.

LUTON.—Plans passed: A. Turner, 12 houses, Trott's-lane; N. Hill, six houses, Argyll-avenue; J. T. Garrett, six houses, Alexandra-avenue; A. Hayward, nine houses, Hitchin-road; S. W. Johnson, six houses, Medina and Beresford-roads.

LUTTERWORTH.—The B.G. has postponed the consideration of its scheme for new baths.

MANCHESTER.—Tenders are now being invited for th new church of St. Crispins, which it is proposed to erect on a site off Upper Lloyd-street, Moss Side, on the new Wilbraham housing estate. The plans have been prepared by Messrs. Thomas Worthington & Sons, architects, 178, Oxford-road. No contracts have yet been placed.—In connection with the erection of the new grammar school which is to be built on the Birch Estate, between Rusholme and Fallowfield, the site is now being cleared. The plans are being prepared in collaboration by Dr. Worthington and Mr. Francis Jones, architects, 178, Oxford-road. Tenders have not yet been invited.—The British Dyestuffs Corporation, Ltd., are proposing to make alterations to their works at Grant-street, Blackley. The contract has not yet been placed.—The rector of the Holy Name has promised the B.E. to have plans of the new school prepared this year. The architect for the schemes are W. Telford Gunson & Son, 10, Marsden-street.

MARGATE.—Plans passed by T.C.: C. B. Hughes, nine houses, Ramsgate-road; Wood & Co., six houses, Selbourne-road.

MIDDLETON.—Plans passed by T.C.: Dixon, Hill & Co., for Oldham Building Co., 11 houses, Mills Hill-road.

NELSON.—The M.H. has sanctioned the acceptance by the T.C. of the tenders for 100 houses.—Private contractors are asking for subsidies in respect of 97 houses, and the T.C. is moving to take possession of Hodge House farm for building.—Plans for a new secondary school have been approved by the County Higher Education Committee.—Plans passed by T.C.: J. P. Earnshaw, eight houses, Pont-street; T. Dent & Sons, ten houses, Halifax-road.

NEWTOWNARDS.—A resolution has been passed by the U.D.C. to proceed with the erection of a further nineteen houses.

PLYMOUTH.—The C.B. has resolved that the plan and estimate of £465 submitted for the new piggeries be approved.—The following loans have been sanctioned: £2,080, for laying of culverts at Weston Mill and Laira recreation grounds, and £2,470, for enlargement and improvement of Little Efford open-air school.—The Council has resolved, now the M.H. has sanctioned the scheme, to provide a sanitary annexe at the Sanatorium.—Application is to be made to the B.E. and M.H. for sanction to a loan of £673, for alterations, &c., at the Victoria-road school.—The B.E. has approved the proposed alterations for the conversion of the Regent-street and Keppel-place central schools into secondary schools.

QUEENSFERRY.—Instruction has been given to the U.D.C. by the Ministry of Health that there is no objection to the proposed lay-out of the Dean Stone housing site.

REIGATE.—Plans approved: Alterations to Laker's Hotel, for J. E. Jefferson.

RICHMOND (SURREY).—Plans passed by T.C.: T. Hooper & Son, 14 houses, Old Deer Park-gardens.—The Borough Engineer has prepared specifications for the making-up of Pensford-avenue, Taylor-avenue, Nylands-avenue, High Park-road, and High Park-avenue, at an estimated cost of £8,298 1s. 2d.—Application is to be made for a further loan of £2,700 for the extension of the public baths.

ROSCOMMON.—The County Board of Health has decided to spend £2,800 in repairing the County Infirmary.

SHEFFIELD.—Plans passed by T.C.: Twelve houses, Brooklands-crescent and Patmore-road, for T. Pye; six houses, Brooklands-crescent, R. Watson; six houses, Huntley-road, J. Ramsden; six houses, 24 shops and nine garages, Infirmary-road, &c., G. H. Simpson; six houses, Aysgarth-road, for L. Wilmin; 18 houses, Hutcliffe Wood and Dalewood-roads, for A. J. Belton; sixteen houses, Pingle-road, for Smith & Hawley; eight houses, Bent-road, for J. A. Wragg; 37 houses, Bingham Park-road, W. Malthouse, Ltd.

SKEGNESS.—Sanction has been given by the U.D.C. to proceed with a large development. The scheme embraces an orchestral piazza fronting the Grand-parade, with shops, promenades, ample shelters, and spacious dancing surface; while at the rear will be a huge open-air bathing pool, together with model yacht pond, paddling pond, and day bungalows fitted with gas ring, &c. The pool is to be of such dimensions as to allow of international and other swimming contests being decided therein. The scheme is estimated to cost £35,000.

SOUTH ELMSALL.—The Parish Councils of South Elmsall and Kirkby have acquired land for the erection of a fire station.

STAMFORD.—Kesteven C.C. has agreed to sell a piece of land to the Standing Joint Committee, on which to erect a new police station.

SWINTON.—The U.D.C.'s proposal to spend £25,000 on the replacement of the old sewage disposal works with a modern scheme was inquired into last week by a Ministry of Health Inspector.

TORQUAY.—Plans passed: Offices, workshops and stores, off Old Mill-road, for Riggs, Waldron & Co.; shops, Belmont and Carlton-road, for Torquay Co-operative Society.

TYNEMOUTH.—The T.C. has sanctioned plans: 12 houses, St. George's estate, Cullercoats, J. R. Wallace for H. D. Burton; social club, corner Chatton-street and Lesbury-street, East Howdon, P. L. Browne & Son for East Howdon Social Club.

WALTON-ON-NAZE.—The U.D.C. has under consideration a scheme to purchase Bath House Meadow for £2,000 to convert into a recreation ground and parking place for motor cars.

WILLESDEN.—The U.D.C. are to obtain tenders for the repairs to the interior of 6, Dyne-road. The Engineer has prepared plans which have been submitted to the M.H. for approval, for the establishment of a clinic at Stonebridge, on the site reserved for the purpose on the Brentfield estate.—The Engineer is to negotiate the acquisition of the land at Cricklewood, for the erection of a small permanent library, at an estimated cost of £1,600.—The Council has approved the proposals for the extension of the Kensal Rise library, at a total cost of £1,850.—Tenders are being invited for the erection of conveniences in Willows-yard.—The Council's Engineer is negotating for a site for a new convenience at Kensal Rise.

WINCHESTER.—The Surveyor is to carry out improvements at the Guildhall at an estimated cost of £1,200.

FIRES.

MILNSBRIDGE.—A fire at the Britannia Mills, owned by Messrs. Shaw & Shaw, last week caused damage estimated at £2,000.

WORKSOP.—Damage estimated at £10,000 has been caused by a fire which occurred at St. Cuthbert's College.

Special Libraries Directory.

In view of the enormous amount of scientific and other special information now available in periodicals and libraries, an association—The Association of Special Libraries and Information Bureaux (38, Bloomsbury-square, London, W.C. 1)—has been formed to assist in making such information available to all who wish to use it. Associate membership is open to anyone interested. With the assistance of the Carnegie United Kingdom Trust the Association has undertaken, as one of its first activities, the compilation of a Directory of sources of specialised information in Great Britain and Ireland. The general editorship of this work has been entrusted to Mr. G. F. Barwick, late Keeper of Printed Books at the British Museum.

Builder's Estate.

Alderman James Storrs, of Stalybridge, Cheshire, head of Messrs. William Storrs, Sons, & Co., Ltd., builders and contractors and cotton spinners, an ex-President of the National Federation of Building Trades Employers, who died on April 30, in his 71st year, left estate of the gross value of £39,733, with net personalty £34,944.

BUSINESSES FOR SALE & WANTED.

Six lines or under 4s. 6d., each additional line 6d.

BUILDERS' MERCHANTS, IRONMONGERS, AND OTHERS.

Re Newsome & Co., Ltd., Mile End-road, E.

MR. JOHN SULLEY, F.A.I., is instructed by the Senior Official Receiver in Companies Liquidation to SELL privately the Stock-in-trade, about £6,000. Lease, Goodwill, etc.—Further particulars can be obtained at 46, Cannon-street, E.C. 4.

BUILDER'S DECORATING AND FURNISHING IRONMONGER'S BUSINESS (old-established) FOR SALE owing to Death, showing substantial profits, with excellent connection, and situated in S.W. London. Stock at valuation.—Offers to MR. J. BRANBURY, 3, Pancras-lane, E.C., where balance-sheets may be seen and full particulars obtained.

IRONMONGER'S, Plumber's, Gas-fitter's BUSINESS and JOB. BUILDERS. Grand position, main road; plenty trade and scope. Price £500 with plant, etc. Freehold £800. £400 mortgage if required. Good opportunity. Six rooms, bath, garden.—Letters, MOGG, 56, Birchanger-road, South Norwood.

DECORATING, BUILDING AND JOBBING BUSINESS FOR SALE with vacant house accommodation, workshops and stores, etc., in Kent. A very attractive business. Plant, stock, including two cars valued over £800. Cash £1,200.—Apply, Box 229, Office of "The Builder."

TO BE LET BY TENDER

CROWN LANDS.

No. 88, REGENT-STREET, W.

BUILDING SITE with Frontages of about 37 ft. to The Quadrant, Regent-street, and about 33 ft. 6 in. to Glasshouse-street, TO BE LET BY TENDER on Building Lease for 80 years from 10th October, 1926. Area about 4,816 square feet, suitable for erection of first-class shops with showrooms or offices over. For particulars, and Forms of Tender, which will be issued shortly, apply to Mr. JOHN MURRAY, F.S.I., 11, Suffolk-street, Pall Mall, S.W.1, or to the SECRETARY, Office of Commissioners of Crown Lands, 1, Whitehall, S.W.1.

CROWN LANDS.

REGENT'S PARK, N.W.

The important Site of ABBEY LODGE and Grounds adjoining HANOVER-GATE and overlooking REGENT'S PARK TO BE LET by TENDER on Lease for 80 years from the 10th OCTOBER, 1926, for the erection of a Block of high-class Residential Flats.—For particulars and Forms of Tender, which will be available shortly, apply to Mr. JOHN MURRAY, F.S.I., 11, Suffolk-street, Pall Mall, S.W.1, or to the Office of Commissioners of Crown Lands, 1, Whitehall, S.W.1.

CONTRACTS

(*Continued from page xii.*)

COUNTY BOROUGH OF PLYMOUTH.

The COUNCIL is prepared to receive TENDERS for the BALLASTING, etc., of about ¾ MILE of ROADS and the CONSTRUCTION of about 1¼ MILES of SEWERS, etc., at the HIGHER MOUNT GOULD HOUSING ESTATE.

Form of Tender, Conditions of Contract, Specification, and Bills of Quantities may be obtained, and Plans and Sections seen at the office of the Corporation Housing Dept., Sun Buildings, Plymouth, on and after the 12th inst.

Tenders, sealed and endorsed "Tenders for Construction of Roads and Sewers at Mount Gould," must be delivered to the Town Clerk, Municipal Offices, Plymouth, not later than 10 a.m. on the 27th inst.

A deposit of Two Guineas will be required and will be refunded on receipt of a bona-fide Tender and the return to the undersigned of all drawings and documents.

The Council does not bind itself to accept the lowest or any Tender.

J. WEBBERLEY,
Borough Engineer and Surveyor.

Municipal Offices,
Plymouth,
10th August, 1926.

GREENFORD URBAN DISTRICT COUNCIL.

TO BUILDERS AND CONTRACTORS.

HOUSING SCHEME.

The above COUNCIL are prepared to receive separate TENDERS for the CONSTRUCTION of NEW ROADS and SEWERS and the ERECTION of 168 HOUSES on the GREENFORD-ROAD SITE, GREENFORD, MIDDLESEX.

On and after August 16th, 1926, Drawings may be seen at the Office of the Architect, Mr. F. T. W. Goldsmith, F.R.I.B.A., M.I.Struct.E., 1, Verulam-buildings, Gray's Inn, W.C. 1, or at the Offices of the Council, Aberdeen House, Greenford, Middlesex.

Forms of Tender and Bills of Quantities for Roads and Sewers, also for the Houses, will be supplied on application to the undersigned on payment of a deposit of £2 2s., which will be refunded on receipt of a bona-fide Tender. Applications must be made not later than AUGUST 31st, 1926.

Sealed Tenders, endorsed "Tender for the Construction of Roads and Sewers," "Tender for the Erection of Houses," to be addressed to the undersigned and sent in on a date to be notified to each applicant when the Quantities are forwarded.

The Council do not bind themselves to accept the lowest or any Tender.

A. LLOYD-JONES,
Clerk to the Greenford Urban District Council.

New Broadway Chambers,
New Broadway, Ealing, W. 5.
11th August, 1926.

PRICES CURRENT OF MATERIALS

[Owing to the exceptional circumstances which prevail at the present time, prices of materials should be confirmed by inquiry.—Ed.]

BRICKS, &c.

Per 1,000 Alongside, in River Thames up to London Bridge.

	£ s. d.
Best Stocks	4 5 6
Second Hard Stocks	3 19 6

Per 1,000. Delivered at London Goods Stations.

	£ s. d.		£ s. d.
Flettons, at			
King's Cross	2 13 3	Best Blue Pressed Staffs	9 5 0
Do. grooved for Plaster	2 15 3	Do. Bullnose	9 15 0
Do. Bullnose	3 8 3	Blue Wire Cuts	7 5 0
Best Stourbridge Fire Brick :—			
2½ in.	8 11 0	3 in.	10 3 0
GLAZED BRICKS—			
Best White Ivory, and Salt Glazed Stretchers	21 10 0	D'ble Str'tch'rs	30 0 0
Headers	21 0 0	D'ble Headers	27 0 0
Quoins, Bullnose and 4½ in. Flats	28 0 0	One Side and two ends	31 0 0
		Two Sides and one End	32 0 0
		Splays and Squints	29 10 0

Second Quality, £1 per 1,000 less than best. Cream and buff, £2 extra over white. Other colours, Hard Glaze, £5 10s. extra over white.

BREEZE CONCRETE SLABS.

Delivered London.

	s. d.		s. d.
2 in. per yd. super	1 11	3 in. per yd. super	2 9
2½ in. „ „	2 4	4 in. „ „	3 6

	s. d.	
Thames Ballast	10 6	per yd.
Pit Sand	13 9	„ „
Thames Sand	14 6	„ „
Best Washed Sand	14 6	„ „
¾ in. Shingle for Ferro-Concrete	12 9	„ „
¾ in. „ „	14 0	„ „
¾ in. Broken Brick	11 6	„ „
Pan Breeze	7 6	„ „

delivered 2 miles radius Paddington.

Per ton delivered in London area in full van loads.

	£ s. d.
Best Portland Cement. British Standard Specification. Test £2 18 0 to £3 3 6 51s. alongside at Vauxhall in 80-ton lots.	
Ferrocrete per ton extra on above	0 10 0
Super Cement (Waterproof)	4 8 0
Roman Cement	8 15 0
Parian Cement	5 15 0
Keene's Cement, White	5 15 0
„ „ Pink	5 10 0
Plaster, Coarse, Pink	3 0 0
„ „ White	3 12 6
„ Fine	5 12 0
Sirapite, Coarse	3 9 0
„ Finish	3 17 0
Grey Stone Lime	2 16 9
Chalk Lime	2 16 9
Best Ground Blue Lias Lime	2 9 6
Hair per cwt.	2 2 6
Granite Chippings	1 12 0

NOTE.—Sacks are charged 1s. 9d. each and credited 1s. 6d. if returned in good condition within three months carr. pd.

Stourbridge Fireclay in s'cks 35s. 0d. per ton at rly. dp.

STONE.

	s. d.
BATH STONE—delivered in railway trucks at Westbourne Park, Paddington, G.W.R., or South Lambeth, G.W.R., per ft. cube	2 9½
Do. do. delivered in railway trucks at Nine Elms, L. & S.W.R., per ft. cube	2 11½
PORTLAND STONE—	
Brown Whitbed, in random blocks of 20 ft. average, delivered in railway trucks at Nine Elms, L. & S.W.R., South Lambeth Station, G.W.R., and Westbourne Park, Paddington, G.W.R., per ft. cube	4 4
Do. do delivered on road wagons at above stations, per ft. cube	4 5
White basebed, 3d. per ft. cube extra.	
NOTE.—1d. per ft. cube extra for every foot over 20 ft. *average*, and ½d. beyond 30 ft.	
HOPTON-WOOD STONE—	
Delivered at any Goods Station, London.	s. d.
Random blocks from 10 ft. and over P. ft. cb.	17 0
Sawn two sides „	27 0
Sawn three or four sides „	32 0
YORK STONE, BLUE—*Robin Hood Quality.*	
Delivered at any Goods Station, London.	s. d.
6 in. sawn two sides landings to sizes (under 30 ft. super.) Per ft. super	5 6
6 in. rubbed two sides, ditto „	6 0
3 in. sawn two sides slabs (random sizes) „	2 3½
2 in. to 2½ in. sawn one side slabs (random sizes) „	1 6½
1½ in. to 2 in. ditto, ditto „	1 4
HARD YORK—	
Delivered at any Goods Station, London.	
Scappled random blocks Per ft. cube	6 3
6 in. sawn two sides landing to sizes (under 40 ft. super) Per ft. super	5 1½
6 in. rubbed two sides, ditto „	6 1½
4 in. sawn two sides slabs (random sizes) „	2 10
3 in. ditto ditto „	2 1½
2 in. self-faced random flags Per yd. super	9 0

CAST STONE.

Delivered in London Area in full van loads, per ft. cube :—Plain, 8s. 6d.; Moulded, 9s. 6d. Cills, 10s. 0d.

WOOD.

GOOD BUILDING DEAL.

Inches.	per stan.	Inches.	per stan.
4 × 11	£28 0	3 × 6	£21 0
4 × 9	25 0	3 × 11	25 0
4 × 8	24 0	2 × 11	25 0
4 × 7	23 0	3 × 9	24 0
3 × 8	21 0	2½ × 9	23 0
3 × 7	20 0	3 × 4½	22 0
2½ × 7	20 0	3 × 4	22 0

PLANED BOARDS.

1 × 11	£27 0	1 × 9	£26 0

PLAIN EDGE FLOORING.

Inches.	per sq.	Inches.	per sq.
¾	20/-	1¼	31/-
¾	22/-	1½	34/-
1	25/-		

TONGUED AND GROOVED FLOORING.

Inches.	per sq.	Inches.	per sq.
1	25/-	¾	16/6
1¼	31/-	¾	19/-
1½	34/-	1	24/-

BATTENS.

Inches.	s. d.
¾ × 2	2 6 per 100 ft.

SAWN LATHS.

	£ s. d.
Per bundle	0 2 4

1" AND UP THICK.

	£ s. d.		£ s. d.
Dry Austrian Wainscoat, per ft. cube	0 16 0	to	0 18 0
Dry American and /or Japanese Figured Oak, ft. cube	0 15 0	to	—
Dry American and/or Japanese Plain Oak, ft. cube	0 11 0	to	0 13 0
Dry sq. edged Honduras Mahogany, ft. cube	0 16 0	to	0 18 0
Dry Log cut Honduras Mahogany, ft. cube	0 18 0	to	1 1 0
Dry Cuba Mahogany, ft. cube	1 4 0	to	1 10 0
Dry Teak, ft. cube	0 13 0	to	0 15 0
Dry American Whitewood, ft. cube	0 11 0	to	0 14 0
Best Scotch glue, per cwt.	4 10 0	to	—
Liquid Glue, per cwt.	4 7 0	to	5 10 0

SLATES.

First quality slates from Bangor or Portmadoc carriage paid in full truck loads to London Rate Station. Per 1,000 of 1,200.

	£ s. d.		£ s. d.
24 by 12	37 12 6	18 by 10	21 2 6
22 by 12	34 0 0	18 by 9	18 12 6
22 by 11	31 5 0	16 by 10	17 12 6
20 by 12	29 15 0	16 by 8	13 15 0
20 by 10	25 12 6		

TILES.

Delivered at London rate stations in full truckloads of not less than 4 tons. Per 1,000 f.o.r. London.

	£ s. d.
Best machine-made tiles from Broseley or Staffordshire district	5 12 6
Ditto hand-made ditto	5 17 6
Ornamental ditto	6 2 6
Hip and valley tiles (per dozen) Hand-made	0 9 6
Hip and valley tiles (per dozen) Machine-made	0 9 0

METALS.

JOISTS, GIRDERS, &c., TO LONDON STATION, PER TON—

	£ s. d.
R.S. Joists, cut and fitted	12 10 0
Plain Compound Girders	14 10 0
„ Stanchions	16 10 0
In Roof Work	19 10 0

MILD STEEL ROUNDS.

To London Station, per ton.

Diameter.	£ s. d.	Diameter.	£ s. d.
¼ in.	12 0 0	⅜ in. to ¾ in.	10 15 0
¾ in.	11 0 0	⅞ in. to 2¼ in.	10 10 0

WROUGHT-IRON TUBES AND FITTINGS—(Discount off List for lot of not less than £7 net value delivered direct from Works, 2½ per cent. less above gross discounts, carriage forward if sent from London Stocks.)

	Tubes.	Fittings.	Flanges.
Black Gas	60 %	50%	60%
Galvanised Gas	45 %	40%	50%
Blue Water	55 %	45%	55%
Galvanised Water	38½%	35%	45%
Red Steam	50 %	40%	50%
Galvanised Steam	32½%	30%	40%

C.I. HALF-ROUND GUTTERS—London Prices, ex Works.

Per yd. in 6 ft. lengths.	Gutters.	Angles and Nozzles.	Stop Ends.
3 in.	1/2½	11½d.	3½d.
3½ in.	1/4	1/0½	3½d.
4 in.	1/5	1/2½	3½d.
4½ in.	1/6½	1/4	4½d.
5 in.	1/9½	1/5½	5½d.
O.G. GUTTERS.			
3 in.	1/7	1/3½	3½d.
3½ in.	1/7	1/3½	3½d.
4 in.	1/8½	1/4	3½d.
4½ in.	1/10½	1/6½	4½d.
5 in.	2/3	1/9½	5½d.

RAIN-WATER PIPES, &c.

Per yd. in 6 fts.	Pipe.	Bends, stock angles.	Branches, stock angles.
2 in. plain	1/9½	1/2½	1/8½
2½ in. „	1/11½	1/4	2/0½
3 in. „	2/4½	1/8	2/6
3½ in. „	2/10	2/-	2/10½
4 in. „	3/3	2/4½	3/6

L.C.C. COATED SOIL PIPES—London Prices, ex Works.

	Pipe.	Bends, stock angles.	Branches, stock angles.
	s. d.	s. d.	s. d.
2 in. per yd. in 6 fts. plain	2 11	2 3	2 9
2½ in. „	3 5	2 6	3 5
3 in. „	4 1	2 9	4 0½
3½ in. „	4 5½	3 5	4 8½
4 in. „	4 11½	3 9½	5 5½

L.C.C. COATED DRAIN PIPES—London Prices ex Works.

	Pipe.	Bends, stocks angles.	Branches, stock angles.
	s. d.	s. d.	s. d.
3 in. per yd. in 9 ft. lengths	4 3	5 9	7 6
4 in. „ „	6 3	6 11	9 6
5 in. „ „	7 10	12 0	16 3
6 in. „ „	9 6	15 0	20 9

Gasken for jointing, 38/6 per cwt.

IRON—	Per ton in London. £ s. d.		£ s. d.
Common Bars	13 0 0	to	14 10 0
Staffordshire Crown Bars—good merchant quality	14 5 0	..	15 5 0
Staffordshire "Marked Bars	16 5 0	..	17 5 0
Mild Steel Bars	10 0 0	..	11 0 0
Steel Bars, Ferro-Concrete quality, basis price	10 0 0	..	11 0 0
Hoop iron, basis price	12 0 0	..	13 0 0
„ Galvanised	27 0 0	..	28 0 0
Soft Steel Sheets, Black—			
Ordinary sizes to 20 g.	13 5 0	..	14 5 0
„ „ 24 g.	14 5 0	..	15 5 0
„ „ 26 g.	16 5 0	..	17 5 0
Sheets Flat Best Soft Steel, C.R. & C.A. quality—			
Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 20 g.	15 10 0	..	16 10 0
Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 22 g. and 24 g.	16 10 0	..	17 10 0
Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 26 g.	18 10 0	..	20 10 0
No. 1 quality £4 per ton extra.			
Flat and Galvanised Corrugated Sheets—			
Ordinary sizes, 6 ft. to 9 ft. to 20 g.	18 10 0	..	19 10 0
Ordinary sizes, 6 ft. to 9 ft. to 22 g. and 24 g.	19 0 0	..	20 0 0
Ordinary sizes, 6 ft. to 9 ft. to 26 g.	22 0 0	..	23 0 0
Sheets Galvanised Flat, Best quality—			
Best Soft Steel Sheets, 6 ft. by 2 ft. to 3 ft. to 20 g. and thicker	22 0 0	..	23 0 0
Best Soft Steel Sheets, 22 g. and 24 g.	24 0 0	..	26 0 0
Best Soft Steel Sheets, 26 g.	25 10 0	..	26 10 0
Cut Nails, 3 in. to 6 in.	19 0 0	..	20 0 0

(Under 3 in. usual trade extras.)

METAL WINDOWS.—Standard sizes, suitable for complete houses, including all fittings, painting two coats, and delivery to job, average price about 1s. 4d. to 1s. 7d. per foot super.

LEAD, &c.

(Delivered in London.)	£ s. d.
LEAD—Sheet, English, 4 lb. and up	45 0 0
Pipe in coils	46 10 0
Soil Pipe	48 10 0
Compo Pipe	49 10 0

NOTE—Country delivery, 30s. per ton extra: lots under 3 cwt., 3s. per cwt. extra, and over 3 cwt. and under 5 cwt., 1s. 6d. per cwt. extra. Cut to sizes, 2s. cwt. extra.

Old lead, ex London area, at Mills per ton	30 10 0	—	
Do., ex country, carriage forward per ton	31 10 0	—	

COPPER.

		s. d.
Seamless Copper tubes (basis)	per lb.	1 0½
Strong sheet	„	1 0
Thin	„	1 1
Copper nails	„	2 3
Copper wire	„	2 4

PLUMBERS' BRASS WORK.

Delivered in London.

NEW RIVER PATTERN SCREW DOWN BIB COCKS FOR IRON.

½ in.	¾ in.	1 in.	1¼ in.	1½ in.	2 in.
29/-	45/-	76/-	153/-	246/-	510/- per doz.

NEW RIVER PATTERN SCREW DOWN STOP COCKS AND UNIONS.

½ in.	¾ in.	1 in.	1¼ in.	1½ in.	2 in.
41/6	62*-	92/-	174/-	300/-	588/- per doz.

NEW RIVER PATTERN SCREW DOWN MAIN FERRULES.

½ in.	¾ in.	1 in.
39/6	60/-	116/6 per doz.

CAPS AND SCREWS.

1¼ in.	1½ in.	2 in.	3 in.	3½ in.	4 in.
7/6	10/-	14/-	23/-	30/-	42/- per doz.

DOUBLE NUT BOILER SCREWS.

½ in.	¾ in.	1 in.	1¼ in.	1½ in.	2 in.
7/6	11/-	17/-	29/-	38/-	63/- per doz.

BRASS SLEEVES.

1¼ in.	2 in.	3 in.	3½ in.	4 in.
10/-	12/-	20/-	24/-	31/- per doz.

NEW RIVER PATTERN CROYDON BALL VALVES, S.P.

½ in.	¾ in.	1 in.	1¼ in.
35/-	56/-	98/-	162/- 228/- per doz.

DRAWN LEAD P. & S. TRAPS WITH BRASS CLEANING SCREW.

	1¼ in.	1½ in.	2 in.	3 in.
8 lbs. P. traps	33/-	41/-	56/-	101/- per doz.
8 lbs. S. traps	35/-	45/-	68/-	126/- „

TIN—English Ingots, 2/10 per lb. SOLDER—Plumbers' 1/2, Tinmen's 1/5. Blowpipe 1/6 per lb.

PAINTS, &c.

		£ s. d.
Raw Linseed Oil,	in pipes per gallon	0 3 1
„ „ „	in barrels „	0 3 3
„ „ „	in drums „	0 3 6
Boiled „	„ in barrels „	0 3 3
„ „	„ in drums „	0 3 6
Turpentine	in barrels „	0 5 9
	in drums (10 gall.) „	0 5 11
Genuine Ground English White Lead, per ton (In not less than 5 cwt. casks.)		54 15 0
GENUINE WHITE LEAD PAINT— "Father Thames," "Nine Elms," "Park," "Supremus," "St. Paul's," "Morganswyte," "Polacco," "J" Brand and other best brands (in 14 lb. tins) not less than 5 cwt. lots per ton delivered		73 5 0
Red Lead, Dry (packages extra)	per ton	45 10 0
Best Linseed Oil Putty	per cwt.	0 15 0
Filocol	„	0 15 6
Size. XD Quality	firkin.	0 3 6

Continued on next page.

*The information given on this page has been specially compiled for THE BUILDER and is copyright. Our aim in this list is to give, as far as possible, the *average* prices of materials, not necessarily the highest or lowest. Quality and quantity obviously affect prices—a fact which should be remembered by those who make use of this information.

PRICES CURRENT OF MATERIALS (*contd.*)

GLASS.

ENGLISH SHEET GLASS IN CRATES OF STOCK SIZES.

	Per Ft.		Per Ft.
15 oz. fourths ..	3½d.	32 oz. fourths	7½d.
15 „ thirds	4½d.	32 „ thirds	9½d.
21 „ fourths ..	4½d.	Obscured Sheet, 15 oz.	3½d.
21 „ thirds	5½d.	„ „ 21 „	5½d.
26 „ fourths ..	5d.	Fluted 15oz. 6½d., 21oz.	9½d.
26 „ thirds	7½d.	En'lled 15oz. 5½d., 21oz.	7½d.

Extra price according to size and substance for squares cut from stock.

ENGLISH ROLLED PLATE IN CRATES OF STOCK SIZES.

	Per Ft.
¼ Rolled plate	4½d.
⅜ Rough rolled	5½d.
½ Rough rolled	6½d.
Figured Rolled, Baltic, Oceanic, Arctic, Stippolyte, and small and large Flemish White..	6½d.
Ditto, tinted	9d.
Rolled Sheet	6d.
White Rolled Cathedral	5½d.
Tinted do.	7½d.

Cast Plate is same price as rough rolled.

VARNISHES, &c.

		Per Gallon. £ s. d.
Oak Varnish	Outside	0 14 0
Fine ditto	ditto	0 16 0
Fine Copal	ditto	0 18 0
Pale Copal	ditto	1 0 0
Pale Copal Carriage	ditto	1 4 0
Best ditto	ditto	1 12 0
Floor Varnish	Inside	0 18 0
Fine Pale Paper	ditto	0 18 0
Fine Copal Cabinet	ditto	1 2 0
Fine Copal Flatting	ditto	1 0 0
Hard Drying Oak	ditto	0 18 0
Fine Hard Drying Oak	ditto	0 19 0
Fine Copal Varnish	ditto	1 0 0
Pale ditto	ditto	1 2 0
Best ditto	ditto	1 12 0
Best Japan Gold Size		0 12 0
Best Black Japan		0 10 0
Oak and Mahogany Stain (water)		0 12 0
Brunswick Black		0 7 0
Berlin Black		0 14 0
Knotting (patent)		1 5 0
French and Brush Polish		0 17 0
Liquid Dryers in Terebine		0 9 0
Cuirass Black Enamel		0 7 0

TRADE NEWS

A Travelling Exhibit.

The National Radiator Co., Ltd., of Hull, have recently sent on a tour through the southern counties a motor travelling exhibit, the body of which has been made to resemble a small bungalow, and the interior to represent parts of a hall, a kitchen, a sitting-room, and a bathroom. In the "kitchen" is fitted a "No. 1 Ideal Cookanheat," "Ideal Classic Four Column," and "Ideal Classic Wall Radiators," as well as an "Ideal Towel Rail Radiator," being connected thereto in addition to an indirect cylinder for hot water supply. The whole apparatus forms a working installation, and a lavatory basin in the "bathroom" permits demonstrations of the actual water-heating capacity of the "Ideal Cookanheat." Smokeless fuel (anthracite nuts) is used for stoking, but, of course, the Cookanheat is equally suitable for burning broken gas coke, which is recommended in preference to ordinary house coal, although with some chimney drafts it is necessary to add a little of the latter when the oven and hot plate are in use. Samples of open-fire domestic and "Classic" boilers are also carried inside. Demonstrations have already been given in several towns, and the following definite arrangements have been made:—August 13, Royal York Hotel Yard, George-street, Ryde; August 16 and 17, the Dolphin Hotel Yard, Southampton; August 19 (afternoon) and 20, Lymington; August 23 and 25, Bournemouth (at Messrs. Dowden & Son's Yard, 7, St. Paul's-road, close to Holdenhurst-road); August 27, Weymouth (at Royal Yard, back of Royal Hotel); August 30, Sidmouth; August 31, Budleigh Salterton; September 1 and 2, Exeter; September 4, Taunton; September 7, Shepton Mallet; September 9, Yeovil; September 11 to 14, Bath; September 15 to 17, Bristol; September 20, Swindon; September 23, Newport; September 24 and 25, Cardiff; September, 27, Barry; September, 29 and 30, Swansea; October 4, Leominster.

THE SCOTTISH BUILDER

Edinburgh.—At a sitting of Dean of Guild Court the record number of 92 applications were considered. The following were among the applications granted: Episcopal Church Representative Council, new chapel at St. Andrew's Home, Milton-road, Joppa; Edinburgh and Suburban Building Society (Ltd.), ten bungalows at Station-road, Corstorphine; Murrayfield Real Estate Co. (Ltd.), eight flatted villas at Piersfield-grove; Alex. D. Stewart, 20 semi-detached villas at Inverleith-row.

Glasgow.—Applications passed by Dean of Guild Court:—Corporation Water and Electricity Departments, to erect a water pumping station and electricity substation at Lennox-street; Barclay Curle & Co., Ltd., shipbuilders, &c., Whiteinch, to erect a machine shop at South-street, Whiteinch; Fraser & Borthwick (Ltd.), Pitt-street, additions to premises; Whiteinch U.F. Church, additions to church at Dumbarton-road and Victoria Park-street, Scotstoun; Anniesland Co-operative Society, (Ltd.), Crow-road, Anniesland, to erect shops, offices, &c., at Fulton-street, Anniesland.

Eighty-six houses are to be erected by the Second Scottish National Company (Housing Trust), Ltd., at Grangad, Glasgow; and forty houses at Craigieknowes, Greenock.

Archæological Discoveries at Athens.

During the work of carting earth from the site of the Athenian Royal stables, which are now being demolished, it was discovered recently that the area was a burial-place, dating back to classical times. Besides a portion of Themistocles' ancient wall of Athens, it is reported that various archæological "finds" were made. The most important was a fine marble statue of an Athenian woman, supposed to date from the third century B.C. Other "finds" include several classical heads, inscriptions, marble urns, and pottery.

Builder's Estates.

Mr. William Laverty, Loughview House, Old Cavehill-road, and Cambridge-street, Belfast, builder and contractor, £34,711.

Peter Dalby, of Summer-lane, Barnsley, builder (net personalty £2,574), £17,910.

PLUMBING TRADES' APPRENTICESHIP COUNCIL

A MEETING of the Plumbing Trades Central Apprenticeship Council for the London Area was held at 3, Great College-street, Westminster, London, S.W., on Tuesday, June 15, Mr. W. D. Caroe presiding. There were also present Messrs. Alex. Grant Vice-Chairman), G. H. Kempster, W. H. Stitson, Chas. E. Robinson, representing the Associated Master Plumbers, Mr. Hugh Davies, Board of Education, Mr. J. H. MacDonald, Education Department, L.C.C., Mr. W. Jarvis, Worshipful Company of Plumbers, Mr. R. H. Bew, National Registration Council; Messrs. H. W. Newman, V. T. Sulston, J. H. Hamlin (Hon. Secretary), representing the United Operative Plumbers' and Domestic Engineers' Association.

The Secretary reported that he had received replies to a letter sent to ascertain from the employers of lads apprenticed under the Apprenticeship Scheme their satisfaction or otherwise, and the progress of the lads apprenticed. All the employers who had replied stated they were perfectly satisfied with the lads' conduct, and the progress was satisfactory. The Council expressed their appreciation at the correspondence and decided to arrange a social function, to be held at the Regent-street Polytechnic during October next, when it is proposed to invite the apprentices working in the London area to attend, when the Chairman will give them a short address, and other members of the Council will talk with them with a view to getting them to show a keen spirit in their work for their own benefit, the employer, and the trade generally.

It was suggested that such meetings of the Council with the enrolled apprentices be made an annual affair, and it is hoped that such meetings will be held at different important technical institutes. Quite a number of apprentices are being taken by the employers, and it is hoped that others will be enrolled in the near future. It would give a fillip to the movement generally if employers would ask for particulars of the Apprenticeship Scheme, either from Mr. W. D. Caroe, Chairman, 3, Great College-street, Westminster, S.W., or Mr. John H. Hamlin, Hon. Secretary, 84, Blackfriars-road, S.E.1.

BUILDING TRADE WAGES IN SCOTLAND.*

THE following are the present rates of wages in the building trade in the principal towns of Scotland. Every endeavour is made to ensure accuracy, but we cannot be responsible for errors that may occur:—

	Masons.	Bricklayers.	Carpenters, Joiners.	Plasterers.	Slaters.	Plumbers,	Painters.	Labourers—Masons' Bricklayers Plasterers'.
Aberdeen	1/8	1/8½	1/8	1/8	1/8	1/8	1/7	10½d. to 1/1
Airdrie	1/8	1/8	1/8	1/8	1/8	—	1/6½	1/3
Alexandria	1/8	1/8	1/8	1/8	1/8	1/8	—	1/2½ to 1/3½
Arbroath	1/7	1/7	1/7	1/7½	1/7	1/7	1/5½	1/1½
Ayr	1/8	1/8	1/8	1/8	1/8	1/8	1/6½	1/3
Bathgate	1/8	1/8	1/8	1/8½	1/8	1/8	1/6½	1/2 to 1/3
Blairgowrie	1/7	1/7	1/7	1/7½	1/5	1/7	1/4	10d. to 1/-
Bo'ness	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3
Coatbridge	1/8	1/8	1/8	1/8	1/8	—	1/6½	1/3 to 1/3½
Dumbarton	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Dumfries	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Dundee	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3
Dunfermline	1/8	1/8	1/8	1/9	1/8	1/8	1/8	1/3½
Edinburgh	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Falkirk	1/7½	1/7½	1/7	1/8	1/7	1/7	1/6½	1/2½
Fort William	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/2
Galashiels	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Glasgow	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Greenock	1/8	1/8	1/8	1/9	1/8	1/8	1/7	1/0½ to 1/3½
Hamilton	1/8	1/8	1/8	1/9	1/8	1/8	1/6½	1/3½
Hawick	1/7	1/7	1/7	1/7-1/7½	1/7	1/7	1/7	1/2½
Helensburgh	1/8	1/8	1/8	1/9	1/8	1/8	1/7	1/3½
Inverness	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/- to 1/2
Kilmarnock	1/8	1/8	1/8	1/9	1/8	1/8	1/8	1/3½
Kirkcaldy	1/8	1/8	1/8	1/9	1/8	1/8	1/8	1/3½
Kirkwall	1/5	1/5	1/4	1/5	1/5	1/4	1/4	1/-
Lanark	1/8	1/8	1/8	1/9	1/8	1/8	1/6	1/0 to 1/3
Leith	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/3½
Motherwell	1/8	1/8	1/8	1/9	1/8	1/8	1/6½	1/3½
Perth	1/8	1/8	1/8	1/9	1/8	1/8	1/6½	1/3
Stirling	1/8	1/8	1/8	1/9	1/8	1/8	1/8	1/3½
Stirlingshire (Eastern District)	1/8-1/10	1/8 1/10	1/8	1/9	1/7	1/8	1/6½	1/3½
Wishaw	1/8	1/8	1/8	1/9	1/8	1/8	1/7	1/3½

* The information given in this table is copyright. The rates of wages in the various towns in England and Wales are given on page 262.

CURRENT PRICES FOR BUILDING WORK IN LONDON*

EXCAVATOR.

		s.	d.
Digging and throwing or wheeling and filling carts, and carting away to shoot—6 ft. deep	per yard cube	11	0
Add if in clay	" "	1	0
Add for every additional depth of 6 ft.	" "	0	6
Planking and strutting to trenches	per foot super	0	5
Do. to sides of excavation, including shoring	" "	1	0

CONCRETOR.

Portland cement concrete in foundation 1 to 6	per yard cube	32	0
Add if in underpinning in short lengths	" "	7	0
Add if in floors 6 in. thick	" "	3	3
Add if in beams	" "	3	9
Add if aggregate 1 : 2 : 4	" "	10	0
Add for hoisting not exceeding 10 ft. beyond the first 10 ft.	" "	2	6

BRICKLAYER.

		£	s.	d.
Reduced brickwork in lime mortar and Fletton bricks	per rod	30	0	0
Add if in stocks	"	7	10	0
Add if in Staffordshire blues	"	22	0	0
Add if in Portland cement and sand	"	1	10	0

FACINGS.

Extra for facing in English or Flemish bond for every 10s. per 1,000 over the price of the common bricks	per ft. super	0	0	1½

POINTING.

Neat flat struck or weathered joint	" "	0	0	3

ARCHES.

Extra only to the price of ordinary brickwork :—				
Fair external in half brick rings	" "	0	0	10
Axed in stocks	" "	0	1	9
Rubbed and gauged jointed in putty camber or segmental	" "	0	6	0

SUNDRIES.

Damp course in double course of slates breaking joint and bedded in Portland cement	" "	0	1	0
Setting ordinary register grates and stoves	each	1	0	0
Setting kitchener, including forming flues, &c., with all necessary fire bricks	"	4	15	0

ASPHALTER.

		s.	d.
Half-inch horizontal damp course	per yard sup.	4	3
Three-quarter-inch vertical damp course	" "	8	6
¾ inch on flats in two thicknesses	" "	6	3
Angel fillet	per foot run	0	3
Skirting and fillet 6 in. high	" "	1	2

MASON.

York stone templates fixed	per foot cube	13	0
York stone sills fixed	" "	22	0
Bath stone and all labour fixed	" "	10	6
Portland stone fixed	" "	20	0

SLATER.

Welsh 16 in. × 8 in. 3 in. lap, including nails	per square	72	9
Do 20 in. × 10 in. Do. Do.	"	80	9
Do. 24 in. × 12 in. Do. Do.	"	90	0

CARPENTER AND JOINER.

Fir framed in plates	per foot cube	5	0
Do. joists	" "	5	6
Do. roofs, floors, and partitions	" "	6	0
Do. trusses	" "	8	6

	¾"	1"	1¼"	2"
Deal rough close boarding per sq.	35/6	40/-	45/-	72/-

		s.	d
Flat centering for concrete floor, including struts or hangers	"	50	0
Do. to beams	per ft. sup.	1	0
Centres for arches	"	1	6
Gutter boards and bearers	"	1	0

FLOORING.

	¾"	1"	1¼"	1½"
Deal-edges shot per sq.		44/6	53/-	60/6
Do. tongued and grooved "		49/-	57/6	65/-
Do. matchings "	45/-	51/-		
Moulded skirting, including backings and grounds per ft. sup.	1/6	1/9	2/0	2/6

SASHES AND FRAMES.

		s.	d.
One-and-a-half moulded sashes or casements	per foot super.	1	10
Two Do. Do. Do.	" "	2	1
Add for fitting and fixing	" "	0	3
Deal-cased frames with 1 in. inner and outer linings, 1¼ in. pulley stiles tongued to linings, hard wood sills with 2 in. moulded sashes in squares, double hung, double hung with pulleys, lines and weights; average size	" "	3	9

DOORS.

	1¼"	1¾"	2"
Two-panel square framed per ft. sup.	2/1	2/4	2/6
Four-panel Do. "	2/5	2/8	2/11
Two-panel moulded both sides "	2/8	2/11	3/2
Four-panel Do. Do. "	2/11	3/2	3/5

CARPENTER AND JOINER—continued.

FRAMES.

		s.	d.
Deal wrot moulded and rebated	per foot cube	14	0

	1"	1¼"	1½"
Plain deal jamb linings framed per ft. sup.	1/7	1/8	1/11
Deal shelves and bearers "	1/4	1/6	1/9
Add if cross-tongued "	2d.	2d.	2d.

STAIRCASES.

	1"	1¼"	1½"	2"	2½"
Deal treads and risers in and including rough brackets	2/1	2/4	2/9	—	—
Deal strings wrot on both sides and framed	1/8	2/-	2/2	2/8	—

		s.	d.
Housings for steps and risers	each	0	11
Deal balusters, 1 in. × 1¼ in.	per ft. run	0	9
Mahogany handrail: average 3 in. × 3 in.	" "	6	0
Add if ramped	" "	11	10
Add if wreathed	" "	23	9

FIXING ONLY IRONMONGERY (INCLUDING SCREWS).

6 in. barrel bolts	8½d.	Rim locks	2/-
Sash fasteners	11½d.	Mortice locks	4/6
Casement fasteners	1/5	Patent spring hinges and letting into floor and	
Casement stays	1/2	making good	19/-
Cupboard locks	1/5		

FOUNDER AND SMITH.

		s.	d.
Rolled steel joists	per cwt.	16	3
Plain compound girders	"	19	0
Do. stanchions	"	21	9
In roof work	"	27	6

RAIN-WATER GOODS.

	3"	4"	5"	6"
Half-round plain rebated joints ft. run	1/6	1/9	2/-	2/6
Ogee Do. Do. "	1/9	2/-	2/6	3/3
Rain-water pipes with ears "	1/9	2/7	—	—
Extra for shoes and bends each	4/4	5/11	—	—
Do. stopped ends "	1/11	2/4½	3/7	4/-
Do. nozzles for inlets "	2/2	2/7	3/10	4/3

PLUMBER.

		s.	d.
Milled lead and laying in flashings and gutters	per cwt.	59	0
Do. Do. in flats	"	58	0
Extra labour and solder in coated cesspools	each	6	9
Welf joint	per ft. run	0	6
Soldered seam	" "	1	6
Copper nailing	" "	0	6

	½"	¾"	1"	1¼"	2"	4"
Drawn lead waste per ft. run	1/2	1/9	2/-	3/4	4/-	—
Do. service "	1/8	2/2	2/7	3/10	—	—
Do. soil "	—	—	—	—	—	6/9
Bends in lead pipe each	—	—	—	—	3/3	8/2
Soldered stop ends "	1/2	1/8	2/1	2/10	3/6	—
Red lead joints "	11d.	1/-	1/3	1/11	2/4	4/10
Wiped soldered joints "	2/10	3/6	4/-	4/11	6/6	9/9
Lead traps and cleaning screws "	—	—	—	14/7	19/6	—
Bib cocks and joints "	6/4	9/7	15/4	41/-	—	—
Stop cocks and joints "	15/4	17/2	25/8	64/-	—	—

PLASTERER.

		s.	d.
Render, float and set in lime and hair	per yard sup.	2	4
Do. Do. Sirapite	" "	2	7
Do. Do. Keen's	" "	3	7
Add sawn lathing	" "	1	7
Add metal lathing	" "	2	6
(Not including hangers or runners, &c., for suspended ceilings.)			
Portland cement screed	per yard sup.	2	2
Do. plain face	" "	3	3
Mouldings in plaster	per 1 girth	0	1½
One-and-a-half granolithic pavings	per yard sup.	5	9

GLAZIER.

		s.	d.
21 oz. sheet plain	per foot sup.	0	8½
26 oz. Do.	" "	1	0
Obscured sheet	" "	1	1
⅛ in. rolled plate	" "	0	9
¼ in. rough rolled or cast plate	" "	0	10½
¼ in. wired cast plate	" "	1	4

PAINTER.

		s.	d.
Preparing and distempering, 2 coats	per yard sup.	0	9
Knotting and priming	" "	0	7
Plain painting, 1 coat	" "	0	9
Do. 2 coats	" "	1	2
Do. 3 coats	" "	1	9
Do. 4 coats	" "	2	4
Graining	" "	2	3
Varnishing twice	" "	1	9
Sizing	" "	0	3
Flatting	" "	0	7
Enamel	" "	1	1
Wax polishing	per foot sup.	0	6
French polishing	"	1	2
Preparing for and hanging paper	per piece, 2/- to 4/-		

* These prices apply to *new buildings only*. They cover superintendence by foreman and carry a profit of 10 % on the prime cost without establishment charges. A percentage of 1½ should be added for Employers' Liability and National Health and Unemployment Acts and from 6d. per £100 for Fire Insurance. The whole of the information given on this page is copyright.

TENDERS.

Communications for insertion under this heading should be addressed to "The Editor," and must reach him not later than Tuesday evening.

* Denotes *accepted*. † Denotes *provisionally accepted*.
‡ Denotes *recommended for acceptance*.
§ Denotes *accepted subject to modification*.

ALFRETON.—At Lincoln-street, Alfreton, (*a*) six houses, parlour type, and (*b*) four houses, non-parlour type, for U.D.C. Mr. R. F. Ward, surveyor :—

Six parlour type—
Bowmer & Kirkland, Heage, near Belper £4,928 0
Harris Bros., Marehay, near Derby 3,136 0
*George Brentnall, Riddings, Alfreton 2,910 0
Four non-parlour type—
*Harris Bros., Marehay, near Derby £1,780
*George Brentnall, Riddings, Alfreton .. 1,608

ALNWICK.—Ten houses, in pairs, in St. George's-crescent, for the U.D.C. Mr. G. Reavell, F.R.I.B.A., architect, Lloyds Bank Chambers :—

Thompson & Son, Alnwick £4,470
*R. Carse & Son, Amble 3,726

BARKING.—For tar-spraying in Longbridge-road and Upney-Lane, for the U.D.C. :—

	Per square yard.
*T. Bright & Son, Edmonton.....	2¾d.
Bristowes Tarvia, Ltd.	4¼d.
British Tar-spraying, Ltd.	4 7-16d.
W. & J. Glossop	3¾d.
Mechanical Tar Spraying and Grouting Co., Ltd.	5¼d.
H. V. Smith & Co., Ltd.	4¼d.
Smith, Wright & Co.	3.9d.

BARNET.—Erection and completion of nine pairs of parlour type houses in Mutton-lane, Potters Bar, for South Mimms R.D.C. Mr. H. W. Poole, Clerk to the Council, 93, High-street, Barnet :—

Clarke Bros., London £12,972 2
J. Allen, Potters Bar 9,540 0
*W. Martin, Potters Bar..... 9,384 12

BATH.—Painting work at the Hospital, for the T.C. :—

*Stocks & Morris £187 9

BEXLEY.—For paving material for the Broadway, for the U.D.C. :—

*Wettern Bros., Ltd.—12 in. by 8 in. Norwegian granite kerb, straight 2s. 11½d. per foot and circular 3s. 8½d. per foot.
*Atlas Stone Co.—Flag paving at 5s. 9d. per yard super.

BIRKENHEAD.—Thirty-two non-parlour houses on the Dell estate, New Chester-road, and 32 non-parlour houses on land known as Thorncote, The Dell-road, for the C.B. Mr. C. Brownridge, Borough Engineer and Surveyor :—

*Joseph Davies, Birkenhead.

BIRMINGHAM.—Reinforced concrete bridge over River Cole, on line of proposed new road, being an extension of Bordesley Green East, Stechford, for T.C. Mr. H. H. Humphries, City Engineer and Surveyor :

Hussey, Egan & Pickmere, Birmingham.
E. E. Jeavons & Co., Dudley Port.
G. P. Trentham, Birmingham.
C. A. Horton, Brierley Hill.
*Muirhead, Macdonald, Wilson & Co., Birmingham.
John Wilson, Birmingham.

BOOTLE.—For supply of road materials to the T.C. :—

*Brooks & Brooks Quarries, Ltd.—100 lineal yards of Haslingden channels, 5s. 8d. per yard.
*Penmaenmawr and Welsh Granite Co.—1,350 tons of 4 in. by 5 in. granite sets, £2 16s. 9d. per ton.

BOSTON.—Erection of 44 houses, for the T.C. :—

*J. H. Hodgson, Boston, £1,544 per block of four.

BOURNE.—Erection of four houses at Thurlby, for the R.D.C. :—

*Harwood Bros.

BUCKS.—Additions and repairs at the Church of England Schools, Datchet, Bucks, for the Vicar and Managers. Mr. A. H. Ryan Tenison, F.R.I.B.A., architect, 21, Great Peter-street, Westminster, S.W.; quantities by Mr. E. R. Babbs, 40, St. James-place, S.W. :—

Mr. Bowyer, Slough £7,108
Mr. Burfoot, Windsor 6,980
Messrs. Hudson Bros., Battersea..... 6,932
Mr. Norris, Sunningdale 6,755
*Mr. Street, Slough 6,379
(Subject to revision.)

CARNFORTH.—Fire station, stables, &c., for the U.D.C. Mr. F. Holt, surveyor :—

Rainey Bros., Barrow-in-Furness £1,667 8 0
John Rigg & Son, Ltd., Carnforth..... 1,570 0 0
J. R. Bush, Warton 1,470 0 0
Thompson & Jackson, Lancaster 1,415 2 3
*W. Robinson & Son, Nether Kellet 1,348 18 4

CASTLEFORD.—Connection with six conversions, and provision of six additional water closets at 1 to 23, Driver's-row, for the U.D.C. Mr. T. E. Birtwisle, Sanitary Inspector :—

Wynne & Smith, Castleford .. £175 4 6
J. J. Dickinson, Methley 148 15 0
E. A. Greaves, Castleford 144 3 6
*J. L. Rodger & Sons, Castleford 143 18 0

CHALFONT ST. PETER.—Reconstruction of bridge across River Misbourne, for the Bucks. C.C. :—

*H. Pinkham & Son, Princes Risborough £2,746 16 10

CHESTERFIELD.—For the construction of seven miles of sewers and three pumping stations, for the R.D.C. :—

*T. Beighton, Brimington, Section 1 .. £10,824
*C. S. Tomlinson, Alfreton, Section 2 .. 11,373
*H. & E. Andrews, Sheffield, Section 3 10,750
*Staveley Iron Co., pipes 12,783

CLACTON-ON-SEA.—For supply of 1,000 tons of cement to the T.C. :—

*J. Sadd & Sons—500 tons, 62s. 5d. per ton.
*Ellis, Partridge & Co.—500 tons, 62s. 5d. per ton.

COLCHESTER.—Supply of engine-room tiles, for T.C. :—

*C. J. Edwards, Ruabon..£294, less 5 per cent.

CUDWORTH.—300 houses on the Darfield-road site, for the U.D.C. :—

*Oakland, Ltd.—150 houses at.. £838 13 8
*Mr. Stothard—102 houses at.. 890 0 0
*Garbutt & England—58 houses at 934 13 4

DARTFORD.—For wiring 100 houses on Lowfield-street housing estate, for the U.D.C. :—

*E. E. Beaven ..... £4 2 6 per house

DARTFORD.—For the erection of 200 houses, for the U.D.C. :—

†Walter Dyer, Ltd. £91,200

DENHOLME.—For making-up footpaths, &c., for the U.D.C. :—

*J. Smith & Sons £489

DONCASTER.—For erection of motor omnibus loading station, for T.C. :—

†Johnson & Moore £5,228 18 6

DOWNHAM.—Houses in the district, for R.D.C. S. C. Rigg, Building Surveyor :—

*Bell & Staines, King's Lynn—18 houses £13,882
*Wm. Tombleson, Downham—four houses 1,598

DUNFERMLINE.—For (*a*) 24 houses on sites at Townhill, and (*b*) eight at Kingseat, Dunfermline, for the T.C. Mr. A. Shearer, Town Clerk. Quantities by Mr. J. G. Hardie, Surveyor :—

(*A*)

Glazier work—
*Wm. Marshall, Edinburgh .. £50 8 0
Excavator and brickwork—
*D. Anderson, Crossford 3,520 11 10
Carpenter and joiner—
*H. Ramsay, Dunfermline .. 2,184 0 2‡
Slater and roughcast—
*Thos. Steel & Son, Dunfermline 657 13 9
Painter—
*A. R. Skinner & Son, Dunfermline 147 13 2
Plaster—
*Jno. Paris & Son, Dunfermline 778 5 4
Plumber—
*Thomson & Co., Dunfermline 1,000 12 0

EAST PRESTON.—Eight cottages at Clapham, for the R.D.C. Mr. B. E. Booker, surveyor, Red Roof, Mill-lane, Rustington, Littlehampton :—

P. Cooper, Littlehampton £6,216
Sinfield & Sons, Littlehampton.... 4,700
G. E. Lillie, Worthing 4,488
W. A. Churcher & Son, Worthing.... 4,297
G. Doddington, East Preston..... 4,200
*Miles & Jeffries, Durrington..... 4,136

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EAST PRESTON.—External painting and repairs to the premises of the Poor Law Institution at East Preston, near Littlehampton, for the B.G. Mr H. M. Potter, architect, Worthing :—

Edw. Snewin & Son, Worthing.. £1,755 0 0
Wilkinson & Brown, Littlehampton 1,415 16 7
Y. Sandell & Sons, Worthing .. 1,255 0 0
W. J. White & Sons, Littlehampton 1,013 0 0
F. Firth, Shipley, Yorks 945 0 0
*Bostel Bros., Ltd., Worthing .. 926 0 0

EPPING.—Erection of seven pairs of houses, for the R.D.C. :—

*A. W. King, Harlow £5,571 9 6

EXETER.—Drainage of springs at Buddle-lane, for the T.C. :—

*E. Harris & Son..... £175 10

FOLKESTONE.—Six cottages and an entrance lodge at the new Cemetery, Hawkinge, for the T.C. Mr. A. E. Nichols, M.Inst.C.E., Borough Engineer, 11, Church-street.

*Jenner & Son, Folkestone—Two cottages £1,234
*Jenner & Son, Folkestone—Entrance lodge 1,095

GLASGOW.—Construction of bridge over River Kelvin, for the T.C. :—

*William Taylor & Son (Glasgow), Ltd. £73,315 5

GLASGOW.—Painting work at M'Lellan Galleries, for the T.C. :—

*A. Gilchrist & Sons £719 15 9

GLASGOW.—Installation of two Lomond steel sectional boilers at M'Lellan Galleries, for T.C. :—

*J. Combe & Co. £307

GODALMING.—Alterations and additions to bungalow, Primrose Farm, Milford, Surrey, for Mrs. E. D. Armstrong, Birkdale, Lancs. Mr. Philip Spicer architect, 69, Queen's-road, London, N.W. :—

T. Swayne & Son £1,273 0 0
Tribe & Robinson 1,027 0 0
Higlett & Hammond 1,012 0 0
Bunning & Fitton Adams, Ltd. 996 0 0
H. W. Fisk 985 10 0
Enticknap Bros. 975 0 0
H. Raynsford 965 19 6
Blackman & Pettet 930 0 0
*R. Wood & Son, Stoke-road, Guildford 929 0 0

GUILDFORD.—Repainting externally the infirmary and nurses' home at the Institution, Warren-road, for the B.G. Messrs. Norris & Shattock, chartered architects, 51, High-street :—

H. W. Yates, Sunningdale £339
R. Smith & Sons, Bury Fields, Guildford 310
*G. W. Franks, Woodbridge-road, Guildford..... 290

HALIFAX.—Foundation for High-road Well sub-station, for the T.C. :—

*T. Schofield £622 18 5

HALIFAX.—For paving tramway track and resurfacing area in Northgate, for the T.C. :—

*Limmer and Trinidad Lake Asphalte Co., 12s. per super yard.

HALIFAX.—For heating of Technical College, for the T.C. :—

*Rosser & Russell, Leeds..... £1,187

HENDON.—Alterations at Day Nursery, for the U.D.C. :—

*J. Brackley £143 15 9

HENSTEAD.—Erection of 10 houses, for the R.D.C. :—

*G. Barrett (six houses) £1,786 10
*R. Curson (four houses) 1,191 0

HEREFORD.—For the erection of 72 houses on the Westfields estate, for the T.C. :—

*James Byrom, Ltd. ..... £473 per house

HESTON AND ISLEWORTH.—Sixteen semi-detached non-parlour type of houses on the Pear Tree estate, Hounslow, for the U.D.C. Mr. J. G. Carey, engineer and surveyor :—

Brick construction—
Horwood & Son, Hounslow £9,662 8
R. Hewetts, Ltd., Chiswick..... 9,600 0
Moorman, Ward & Co., The Grove, Isleworth..... 9,451 12
F. Perry & Sons, West Ealing.... 8,368 0
*Kempster & Williams, Burton-avenue, Watford..... 7,946 0
Special construction—
Triangular Block Co., Ltd., East Molesey 8,880 0
Tibbenham Construction Co., Ltd., London 8,000 0

HITCHIN.—Sixty-four cottages (Group No. 3), for the U.D.C. Mr. A. T. Blood, Surveyor, Hitchin U.D.C. :—

Kempster & Williams, Watford.... £34,507
Hawkes & Son, Chelmsford 32,425
F. Newton, Hitchin 31,474
Miskin & Son St. Albans..... 31,346
Willmott & Sons, Hitchin..... 31,045
Arthur Carter, Luton 29,910
Foster & Co., Hitchin 28,985
H. King, Garston 28,728
Abdon Clee Stone Co., Bridgnorth .. 28,326
Bennett Bros., Letchworth 28,196
Jeffs & Bigley, Letchworth 27,837
C. A. White, Bedford 26,650
*Jno. Ray, Letchworth 26,435

HITCHIN.—Sixty-four cottages (Group No. 2), for the U.D.C. Mr. A. T. Blood, Surveyor, Hitchin U.D.C.:—

Kempster & Williams, Watford	£41,530
Miskin & Son, St. Albans	37,200
Hawkes & Son, Chelmsford	36,497
Willmott & Sons, Hitchin.....	35,375
Jeffs & Bigley, Letchworth	34,075
F. Newton, Hitchin	31,813
Foster & Co., Hitchin	31,733
Abdon Clee Stone Quarry, Bridgnorth	31,492
Arthur Carter, Luton	31,450
Bennett Bros., Letchworth	31,400
H. King, Garston	30,793
Jno. Ray, Letchworth	29,900
*Pettengell and Clark, Hitchin	28,263
C. A. White, Bedford	28,032

HORSFORTH.—Forty scullery type houses, 40 kitchen-parlour type houses, 20 parlour type houses, in batches of about 8 or 10, on the Cragg Hill site, for the U.D.C. Mr. Jas. E. Aldersley, Housing Architect:—

J. H. Fenwick & Son, Ltd., Hull	£44,919

HORSHAM.—Erection of 14 houses, for the R.D.C.:—

*Easton.....	£7,105

HUMBERSTONE.—House for the police, for the Lindsey C.C. Messrs. Scorer & Gamble, architects, Bank-street Chambers, Lincoln:—

E. E. Dale & Sons, Ltd., Cleethorpes	£949 11 0
W. A. Major, Sturton-by-Stow ..	825 0 0
W. Kirton & Son, Grimsby	799 0 0
C. Simons, Cleethorpes	752 13 0
*Fairburns, Grimsby	677 10 6

ILFORD.—For laying asphalt carpeting in Longbridge-road, for U.D.C.:—

*G. Wimpey & Co.	£8,029 10

ILFORD.—Supply of electric book lift, for U.D.C.:—

*Marryat & Scott	£112

ILKLEY.—Glasshouses and heating chambers, for the U.D.C. Mr. J. M. Gameson, surveyor:—

*W. Richardson & Co., Ltd., Darlington.....	£1,076 15

LIVERPOOL.—Junior mixed section of the Duncombe-road Council school, for the T.C. Land Steward and Surveyor:—

*Tysons (Contractors) Ltd., Liverpool.

LIVERPOOL.—Electric sub-station, Queen's-drive, Stoneycroft, for the T.C. Land Steward and Surveyor:—

*Bragg & Collins, Liverpool.

LONDON.—Fifteen flats at the corner of Southampton-street and Grimaldi-street, King's Cross, for the Finsbury B.C. Mr. F. C. P. Monson, F.R.I.B.A., architect, Finsbury-pavement House, 120, Moorgate, E.C.2; quantities by Messrs. Geo. Corderoy & Co., 21, Queen Anne's-gate, Westminster, S.W.1:—

Walter Lawrence & Son, London	£12,156
Henry Knight & Son, Tottenham	12,052
Geo. F. Everitt & Sons, Ltd., Croydon	11,909
F. H. Smith, Croydon	11,890
Geo. Walker & Slater, Derby	11,882
Higgs & Hill, Ltd., London.....	11,768
Albert Monk, Edmonton	11,685
Rowley Bros., Tottenham	11,280
Hill & Curr, Bromley	11,235
*Canonbury Construction Co., Ltd., London	11,005

LUTON.—For sewer in Stockingstone-road, for the T.C.:—

*W. Thompson	£349 14 9

LUTON.—Supply of pumps, &c., for sewage work, for the T.C.:—

*W. H. Allen & Co., Bedford.....	£275

MAIDSTONE.—Erection of four houses at Nettlestead, for the R.D.C.:—

*R. Lawrence	£1,739

MARCH.—Block of offices in extension of the County Hall, for the Isle of Ely C.C. R. S. W. Perkins, County Surveyor, Lynn-road, Wisbech:—

F. W. Shanks, Hunstanton	£8,980
Archer & Sons, Northampton	8,699
Rose & Son, Whittlesey	8,050
Eggitt & Sons, March	7,890
Rands & Son, Wisbech	7,875
Elworthy & Co., Upwell	7,668
*H. G. Papworth, March	7,170

(*Subject to approval of Ministry of Health.)

MARGATE.—Erection of greenhouse at Dane Park, for the T.C.:—

*Foster & Pearson	£548 10

MIDDLETON.—Construction of culvert, for the T.C.:—

*W. H. Worthington, Manchester	£2,755 12 6

MIDDLETON.—Internally painting and decorating the following schools:—(*a*) Middleton Parish School, Long-street; (*b*) Birch School; and (*c*) Rhodes Council School, for T.C. Borough Engineer:—

Parish Church School—

*A. E. Tillsley, Longsight, Manchester	£200 0

Birch School—

*W. Walton, Pendleton, Manchester	90 0

Rhodes School (*Plastering only*)—

*H. Cheetham, Middleton Junction	147 10

MIDDLETON.—Painting structural steelwork and ironwork at the Hilton Fold-lane tramway depot, for the T.C. Borough Architect:—

*H. Cheetham, Middleton Junction.....	£80

NELSON.—For provision of pumping apparatus at sewage works, for the T.C.:—

*D. Adamson & Sons, Ltd., Dukinfield.	

NELSON.—For painting large gas-holder at Gasworks, for the T.C.:—

*Pickles, Ayland & Co., Ossett.	

NEWPORT (MON).—For widening of Cardiff-road for the T.C.:—

*G. F. Leadbeter	£759 18 7

NEWPORT (MON).—For asphalting various roads in the borough, for the T.C.:—

*Western Trinidad Lake Asphalte Co.	£7,072 13 2

NORMANTON.—For electric wiring 34 houses on the Hanson House estate, and electric wiring 86 houses, Snydale-road, for the U.D.C. Mr. J. Hopton, Engineer:

86 houses, Snydale—

*A. H. Marsh, Ossett	£675

34 houses, Hanson House—

*Fairey, Goodenough & Farmery, Castleford	258

OKEHAMPTON.—Culvert and widening of road at Watergate Ford, for the R.D.C. Mr. G. A. Friend, surveyor, Northblew:—

Messrs. Turner Bros., London.....	£777 0
*J. Brooking, Village, Northblew, Devon	648 10

OGMORE VALE.—Alterations at the non-political club and institute. Mr. F. H. Heaven, A.R.I.B.A., chartered architect and surveyor, 2, Church-street, Cardiff; quantities by the architect:—

E. L. Price, Cardiff	£779 18 9
Michael & Dobbins, Ogmore Vale	629 15 2
H. Thomas, Aberkenfig	534 15 9
T. Jenkins, Tonyrefail	514 14 2½
*J. S. Moore, Ogmore Vale	461 10 0

ONGAR.—For (*a*) three pairs at Mill-lane, High Ongar; (*b*) two pairs at Little Mylers, Stondon; (*c*) two pairs at Moreton End, Moreton; (*d*) one pair at Church Field, Doddinghurst; (*e*) one pair at Ladyland, Norton Mandeville, for the R.D.C. Mr. P. R. B. Pearce, Housing Surveyor:—

Doddinghurst, one pair—

W. Spearman & Sons	£912 0 0
H. French.....	888 1 8
A. Dix	883 5 0
W. Gann	872 18 0
W. Saunders.....	871 10 0
*H. Acres, Shelly	856 10 0

High Ongar, three pairs—

W. Saunders.....	£2,610 10
W. Spearman & Sons	2,536 10
A. Parker	2,466 13
W. Noble & Sons.....	2,409 0
*H. Acres	2,404 11

Moreton, two pairs—

Binder Bros.....	£1,830 0
W. Spearman & Sons	1,778 8
*H. Acres	1,667 5

Little Mylers, Stondon, two pairs—

W. Spearman & Sons	£1,709 12
A. Saunders	1,707 0
H. Acres	1,641 2
*W. Noble & Son, Ongar	1,631 10
Surveyor's estimate .....each	420 0

(*Note.*—All tenders include fencing and drainage.)

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OSSETT.—Thirty-four houses in pairs on the Leeds-road site, for T.C. Mr. H. Holmes, Borough Engineer and Surveyor:—

Bricklayer—Gladstone Moorhouse, Ossett.
Carpenter—J. H. Horsnell, Ossett.
Slater—Albert Brown, Wakefield.
Plumber—F. A. Hardy, Morley.
Plasterer—W. Lockwood, Batley.
Painter—Harry Fisher, Dewsbury.

PETERBOROUGH.—For the erection of non-parlour houses on the Elm-street and Park-street Housing Estate, for the T.C.:—

W. Sallabanks	£971 10 per pair
T. Meesons	1,092 0 ,,
J. Cracknell & Son	1,045 0 ,,

(Consideration adjourned.)

PLYMOUTH.—Erection of 256 additional houses at North Prospect, for the T.C.:—

*Eadie, Towers & Co.	£132,066

PONTYGWELLECH.—Diversion of the River Ebbw Fach and a new bridge over same at Pontygwellech, Blaina, for the Monmouthshire C.C. Mr. S. A. Bennett, County Surveyor, Newport, Mon:—

*G. Fred Leadbeter, Newport	£4,185 3

PONTYPRIDD.—Reinforced concrete for construction of an open-air swimming bath at Ynysangharad Park, for U.D.C. Mr. W. E. Lowe, engineer and surveyor:—

Mackenna, Ltd., Swansea.....	£3,700 0 0
W. T. Nicholls, Ltd., Gloucester	3,601 3 6
Yorkshire Hennebique Co., Ltd., Leeds	3,525 0 0
D. J. Thomas, Neath.....	3,482 9 5
F. J. Thomas, Cardiff	3,211 16 11
T. Walker, Swansea	3,133 1 6
Durnford Construction Co., Ltd., Bristol	2,963 16 3
Vickey Bros., Barry	2,641 18 11
W. Thomas & Co., Cardiff.....	2,558 18 0
Civil Engineering Construction Co., Cardiff.....	2,345 2 0
John MacColville, Abergavenny	2,305 12 4
Ivor W. Thomas, Llantwit Vadle, Glam.	2,290 15 0
Wm. Rowkes	2,200 0 0
W. Thomas & Co., Cardiff.....	2,130 2 6
*J. Sutherland, Abercynon, Glam.	1,973 1 0

PUDSEY.—Twenty parlour and 16 non-parlour type houses on the Carlisle-road estate, for the T.C. Mr. H. Noble, Borough Surveyor:—

*H. Hirst, Birkenshaw (Yorks)	£17,800

RICHMOND (SURREY).—For extension of public baths and provision of new laundry, for the T.C.:—

J. E. Billings & Co.	£8,620 0
Soole & Son.....	8,465 0
Speechley & Smith.....	8,331 0
Halliford, Ltd.	8,286 10
M. Greenwood & Son	8,150 0
*W. H. Cooper & Son, 207, Hammersmith-road, W.....	7,168 10

RICHMOND (SURREY).—For the erection of 68 houses, for the T.C.:—

*Cory & Cory—35 houses.....	£21,025
*R. Dixon & Sons—28 houses.....	13,496

RICHMOND (SURREY).—For repairs at Secondary Schools, for the T.C.:—

*Speechley & Smith	£107

ROCHDALE.—Bus garage in Mellor-street, for the Corporation:—

R. & T. Howarth, Rochdale.

ROCHDALE.—Annexe to the existing engine-room at the electricity works, Dane-street, for the C.B. Borough Surveyor and Engineer:—

D. Mitchell, Rochdale.

ROCHDALE.—128 houses on the Albert Royds-street estate, for the C.B. Mr. S. H. Morgan, Borough Surveyor:—

R. & T. Howarth, Rochdale.

ROYSTON.—Fourteen non-parlour type houses on land situate in High-street, together with roads and sewers, for U.D.C. Messrs. Dyson, Cawthorne & Coles, architects, 10, Regent-street, Barnsley:—

*Messrs. Glew Bros., Royston.

ST. AUSTELL.—Internal alterations and decoration, and electric wiring of premises in Fore-street, for U.D.C. Mr. E. D. Groves, surveyor:—

*B. & A. S. Warne, St. Austell.....	£320 0
*Messrs. W. G. Heath & Co., Plymouth	32 10

SALFORD.—Extension of electric lighting installation at Poor Law Offices, Eccles New-road, for the B.G. Mr. Ernest Hill (of Messrs. W. T. Gunson & Son), architect: Quantities by architect:—

Billington, Ltd., Salford.....	£93 10

SPENBOROUGH.—Installation of electric light at Millbridge Council mixed and infants' school, Liversedge, for the E.C. Director of Education, Bradford-road, Cleckheaton. The Electrical Engineer, Spenborough U.D.C.:—

Yorkshire Electric Power Co., Leeds	£229 0 0
Thornton & Wood, Doncaster ..	227 0 0
Albert Innes, Leeds.....	198 17 3
F. H. Sowden, Leeds	195 8 0
Butler & Horn, Cleckheaton	195 0 0
A. H. Marsh, Ossett	190 0 0
Cassé & Walker, Bradford	180 0 0
Crosland & Bateson, Heckmondwike	175 0 0
*F. W. Birkett & Sons, Ltd., Cleckheaton	151 18 6

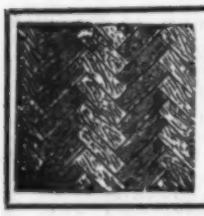
STOURPORT.—Houses, for the U.D.C. Messrs. Pritchard & Goodwin, architects and engineers, Bank Buildings, Kidderminster :—

Parlour type, per pair—
*Thos. Vale & Sons, Ltd., Stourport £1,133

Non-parlour type, per pair—
*E. Oakley & Son, Stourport..... 850

TORQUAY.—Bungalow and garage on the Redcliffe Park estate, for Mr. J. Lilley. Mr. R. A. Rogers, architect, 7, Union-street, Newton Abbot :—
*Hawkins & Son, Torquay £1,925

TORQUAY.—For installation of four extra filter units at filter house at Tottiford, for the T.C. :—
*Candy Filter Co. £2,139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TROWBRIDGE.—Seventy-eight non-parlour type houses, Dursley-road housing site, and also for construction of a temporary roadway on the site, for U.D.C. Mr. G. W. J. Clark, engineer and surveyor :—

Dacombe & Rabbetts, Upper Parkstone, Dorset—			
Houses	£41,858	1	6
Road	429	2	0
H. Isley, Trowbridge—			
Houses	40,931	15	0
Road	330	5	8
H. S. Bowyer, Bradford-on-Avon—			
Houses	39,357	18	3
Road	640	0	0
Coles Bros., Ltd., Bath—			
Houses	38,094	10	6
Road	460	7	3
J. T. Parsons, Westbury—			
Houses	36,683	10	0
Road	387	0	0
Holdaway & Son, Westbury—			
Houses	35,100	0	0
Road	424	15	0
Abdon Clee Stone Quarry Co., Bridgnorth—			
Houses	35,093	15	8
Road	390	19	0
*E. Linzey & Son, Halve, Trowbridge—			
Houses	34,763	0	0
Road	403	19	6
C. Crook & Sons, Melksham—			
Road	390	13	0
*G. Hillier, Trowbridge—			
Road	234	16	4

(*Accepted subject to Ministry of Health's approval.)

UXBRIDGE.—Construction of roads and sewers, for the R.D.C. :—
*Percy Trentham, Ltd. £6,137 16 3

WALTON-LE-DALE.—For the erection of 20 houses at Bamber Bridge, for the U.D.C. :—
*G. Woods & Son..... each £445

WALTON-ON-NAZE.—Erection of 10 houses on Kirby-road site, for the U.D.C. :—
*Gladwell & Co.

WANTAGE.—Erection of 30 in the parishes of East Ilsley (6), Chaddleworth (6), Letcombe Bassett (6), Childrey (4), Harwell (4), and East Hendred (4), Parishes of East Ilsley and Chaddleworth, H. H. Parkhouse, Charlton-road, Wantage; parishes of Letcombe Bassett, Childrey, Harwell, and East Hendred, J. W. Harris, East Challow, Wantage :—

Parishes of Harwell, East Hendred, Letcombe Bassett and Childrey—
*W. A. Wheeler & Co., Wantage £7,600 0 0
Parish of Chaddleworth—
*Mr. Mark Carter, Chaddleworth 2,542 11 6
Parish of East Ilsley—
*W. B. Goddard, East Ilsley.... 2,000 0 0

WARE.—Erection of 30 houses, for the R.D.C. :—
*Kempston & Williams, Watford.. £13,337 8

WILDEN.—New bridge in reinforced concrete on the Ravensden-road, near Rectory Farm, Wilden, for the Bedfordshire C.C. :—
‡Wrycroft & Sons, St. Neots..... £365 10

WINCHESTER.—Erection of 70 houses, for the R.D.C. :—
*E. H. White & Son (52 houses) £23,200
*H. J. Goodall & Sons (16 houses) 7,120

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WOLVERHAMPTON.—For the erection of 52 houses on the Ox Barn estate, for the T.C. :—
*A. M. Griffiths, Wolverhampton £27,007 10

WOLVERHAMPTON.—Re-roofing covered yards at Barnhurst Farm, for the T.C. :—
*Bell's Poilite and Everite Co..... £410

WOLVERHAMPTON.—For various machinery for bio-aeration scheme, for the T.C. :—
*Power Pulley Co., Manchester.... £290 0
*Hoffmann Manufacturing Co. 224 16

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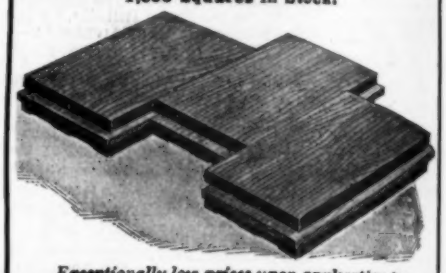
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